JULY '58

MODERN TEXTILES MAGAZINE

Specializing in Man-Made Fibers and Blends since 1925

FIBERS

FABRICS

FINISHES

EDMON LUKE of Amerotron believes gray goods should be sold at a profit—story on page 29

THIS MONTH'S SPECIAL FEATURES

Measuring wash-and-wear properties

Easy, low-cost fabric storage

New tufting trends in England

How to make Arnel easy care fabrics

AND 13 MORE HELPFUL ARTICLES AND TIMELY REPORTS

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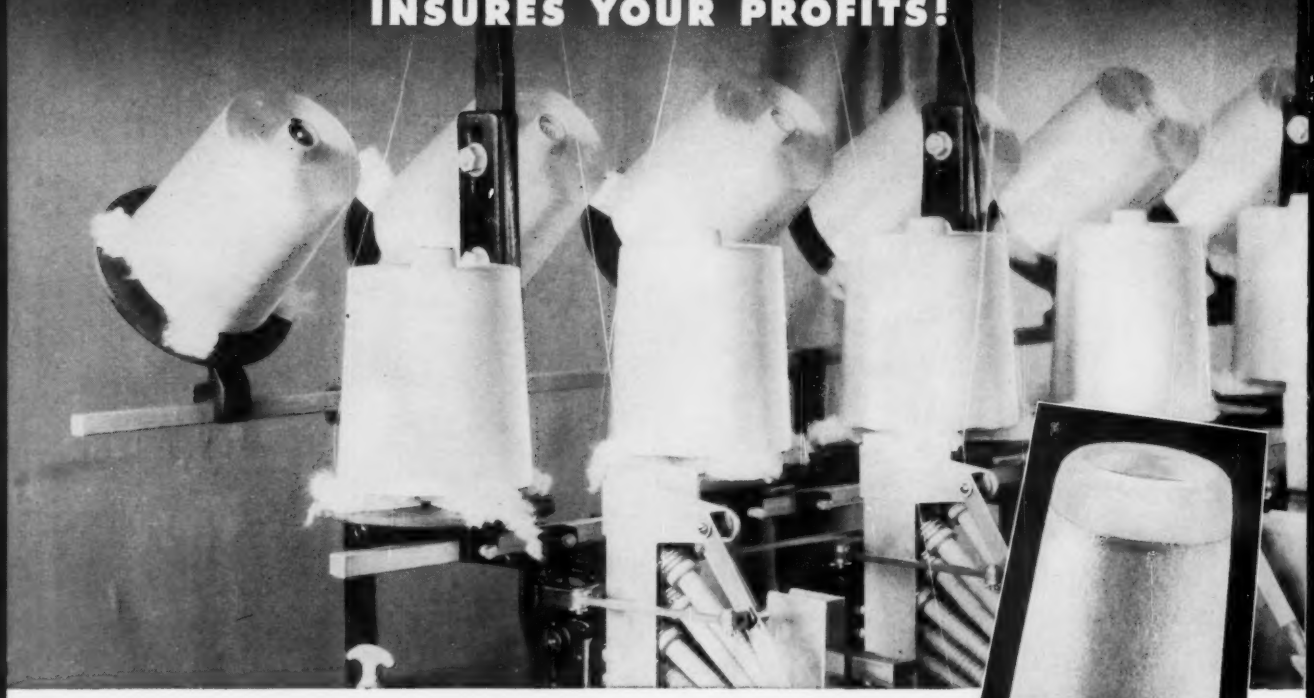
INSURES YOUR PROFITS!



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3° 30′ CONES

Only the best carrier can give you the perfect package necessary to insure your profits—and only SONOCO, with nearly 60 years' experience, can give you the carrier best suited to your needs.

The 3°30′ cone was originated by SONOCO with the introduction of rayon. Problems in winding and creeling synthetic yarns were solved then, as they are now, with this universally-accepted SONOCO cone.

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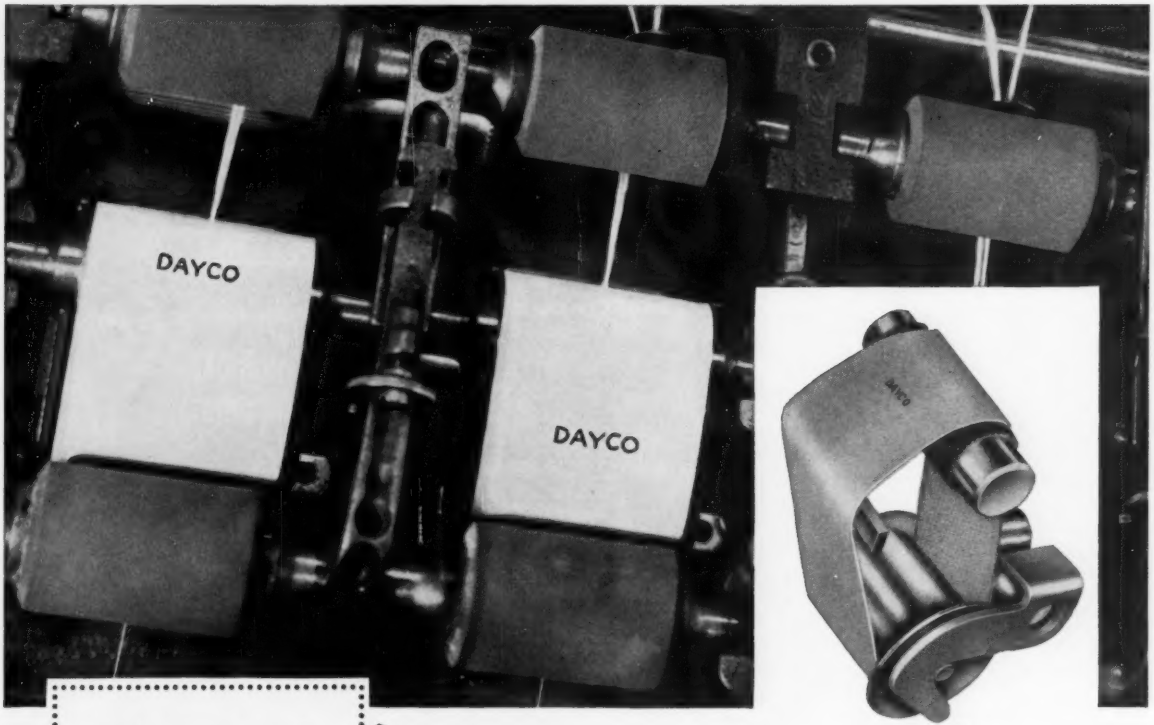
3326

Combining NEW EMBOSSED DESIGN DAYCO APRONS and DAYCO COTS increases yarn quality 10%!



Right away, yarn quality can be improved by as much as 10% when you equip your frames with new Dayco Embossed Design Aprons and Dayco Cots.

Recently perfected, the new Dayco Embossed Design Apron, with its embossed inner surface, is the first basically new apron design in 20 years. It's an unmistakable advantage you can see and immediately appreciate.

Doesn't it make sense to reduce the area of contact if you want to reduce surface friction? That's what Dayton has done by embossing the inner surface of this new apron. Gliding over the nose bar on these bosses, Dayco Embossed Design Aprons cut apron drag in half and show no evidence of chatter or tucking at the nose bar. Laboratory tests further showed that there is less waste collecting at the nose bar when Dayco Embossed Design Aprons are used. Best of all, you don't pay a premium for Dayco Embossed Design Aprons . . . they cost no more than the price you're paying now.

Taken together, both Dayco Aprons and Cots are a balanced blend of synthetic compounds—to create a moisture-free surface that dissipates static and never becomes gummy. The result is faster Monday morning start-ups, fewer ends-down and minimizing of lap-ups.

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For the greatest output of fine quality yarn, equip your frames with the exclusive Dayco Embossed Design Aprons and heat and oil resistant Dayco Cots. Order from your Dayco representative the next time he calls or write the Dayton Rubber Company, Textile Div., 401 S. C. National Bank Building, Greenville, S. C.

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Fiber Sales & Service Allied Chemical *National Aniline Division*

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*Trade Mark—Allied Chemical's Polyamide Fiber

MODERN
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July, 1958 Vol. 39, No. 7

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Man-Made Fiber Producers Association ..... Empire State Bldg., New York
National Federation of Textiles, Inc. ..... 389 Fifth Ave., New York
American Association of Textile Chemists and Colorists ..... Lowell Techn. Inst., Lowell, Mass.
American Association for Textile Technoloy, Inc. ..... 100 W. 55th St., New York
Silk and Rayon Printers and Dyers Ass'n of America, Inc. ..... 1450 Broadway, New York
Synthetic Organic Chemical Manufacturers Association ..... 41 F. 42nd St., New York
Textile Distributors Institute, Inc. ..... 469 Seventh Ave., New York
American Rayon Institute ..... 350 Fifth Avenue, New York

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Zefran Marketing Plans

Marketing and promotion plans for Zefran, the new "acrylic alloy" fiber, have been announced by Dow Chemical Co. A small group of men's, women's and children's clothing in luxury fabrics will be made available for fall 1958 selling. This introductory program will run for a year until autumn of 1958. Mills offering fabrics of Zefran and blends of Zefran and other fibers for fall selling include Worumbo, Warren, A. D. Ellis, Cyril Johnson, Britton Fabrics, Talbott Knitting Mills, Crestwood Textiles, Inc., and William Heller, Inc. Worumbo is offering its first fabric incorporating a man-made fiber, a velour coating in a blend of 55% Zefran and 45% wool. Zefran properties are said to include non-pilling tendencies, ruggedness, long wear and easy-to-care.

Dow is now evaluating a new textile material, Q-957, which is described as a thin narrow tape. Applications in various industries are being considered. Dow said Q-957 can be woven into lightweight fabrics having good cover and relatively high tear strength.

New Industrial Rayon Tire Cord

Limited production of a stronger tire cord with substantially improved performance has been started by Industrial Rayon Corp. Hayden B. Kline, president, said increased quantities of the new tire rayon should become available in the third quarter. He said the new tire yarn is "about 50% stronger than the tire cords produced only six years ago." Concerning the rayon industry in general, Kline said it appeared to have reached "a bottom" and that a really substantial improvement did not seem likely until later in the year. Shareholders at the annual meeting re-elected all of the company's directors.

New Celanese Yarn

Celanese has introduced 75 denier Arnel triacetate in a new 40-filament yarn. The new product, all in 2Z twist, is priced at $1.24 a pound on cones and $1.25 on beams, representing a premium of 8 cents a pound over standard 75 denier 20-filament Arnel yarn. The 40-filament yarn, predominantly for women's apparel, is said to make possible fabrics with a softer hand.

NAWM Elects Officers

William I. Kent, president of Kent Manufacturing Co., was elected president of the National Association of Wool Manufacturers at its 93rd annual meeting in New York. Mr. Kent, 41 years old, is the youngest NAWM president on history. His father, Everett L. Kent and chairman of the Kent firm, headed the NAWM in 1953-54.

Named as vice presidents were: Andre R. Bonte, Bonte Spinning Co.; William J. Dickey, W. J. Dickey & Sons, Inc.; John H. McGowan, Wyandotte Worsted Co.; T. B. Nilsen, J. P. Stevens & Co., Inc., and Ames Stevens, Ames Textile Corp.

French High-Speed Loom

An American loom builder may shortly start producing a new automatic loom, with shuttle, developed in France, according to Nathaniel S. Mitchell, head of Barnes Textile Associates, textile engineering firm. The French loom, whose developer Mitchell declined to name, is said to be capable of speeds of 300 picks a minute.

The French loom is believed in trade quarters here to be the Kiener vertical type, which weaves multiple widths, 30 to 40-inches wide, with shuttles riding up and down on the loom reeds. The merits of the Kiener machine are still being evaluated by domestic textile industry experts.

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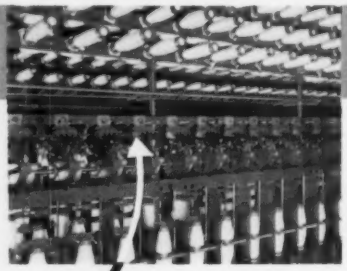
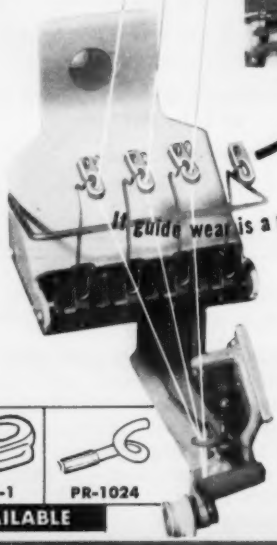
WITHSTANDS HI-SPEED PRESSURE OF SYNTHETIC YARNS



HEANIUM Q240-2 Guides for Ring Twisters are ideal for processing not only glass yarn, but rayon, spun rayon, nylon, wool, cotton and combination yarns—HEANIUM Guides are designed to eliminate production problems encountered by manufacturers in synthetic textile fields.

MOH's hardness 9.5



If guide wear is a problem in your mill . . . try Heanium® IS THE BEST GUIDE TO LOW COSTS.

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Entirely new acrylic alloy fiber made exclusively by The Dow Chemical Company. 2. Processes like a natural fiber: i.e. can be efficiently handled on all standard equipment used for staple yarn manufacture—alone and in blends with other fibers. 3. Continuous dyeing and printing possible on conventional equipment. 4. No costly adjustments or special equipment needed. 5. Adapts itself remarkably to normal wet processing conditions. This adds up to exceptional manufacturing versatility. 6. Available in 2, 3 and 6 denier staple.

Fabrics now being created by selected mills (for apparel only). For further information write The Dow Chemical Company, Textile Fibers Department, Williamsburg, Va.

You can depend on DOW®

Wash-and-Wear Claims

United States Testing Co., Inc., has introduced a new plan for verification of claims for wash-and-wear fabrics. Keystone of the plan is a standardized viewing apparatus, adopted from the graphic arts field, and an objective procedure based on psychometrics. The final result is said to be a reliable system for evaluating the appearance of any fabric or garment under test. Other properties, such as colorfastness, shrinkage and strength, are included in the tests.

Some dissatisfaction has arisen, the testing firm stated, concerning many present wash-and-wear descriptions and claims, but as yet there is no active counter movement. 75% of women questioned in a survey made by the company said they have owned a wash-and-wear garment of some type. The survey was made in the New York area to determine consumer acquaintance and attitude towards wash-and-wear. 55% of those questioned said they were willing to pay more for wash-and-wear garments and 45% said no. Many qualified their answers by indicating they would be willing to pay a premium for truly wash-and-wear garments. Those questioned also referred to the fact that wash-and-wear claims made for some items were not always true. Consumers suggested labels should more fully detail the claims for each wash-and-wear garment.

New Elastomer Fiber

U. S. Rubber Co. is reported to have begun evaluation of a new experimental elastomer fiber trademarked "Vyrene." Du Pont also is investigating a similar fiber (see June issue, p. 8). U. S. Rubber has not disclosed any details of its program. Vyrene reportedly is designed for use in swimwear and foundation garments.

More "Super Super" Rayon Cord

American Viscose Corp. and Beaunit Mills, Inc., recently announced that they are converting their tire yarn manufacturing capacity to production of "super super" yarn. American Viscose stated that recent development work conducted with major tire makers has indicated the superiority of this yarn for certain tire body constructions. "Super super" rayon, particularly in 1100 denier, is said to be finding more favor in the tire industry where the trend in tire production is in the direction of lighter weight and stronger yarns. Conversion of all of Avisco's rayon tire yarn facilities to the "super super" type will take several months.

Beaunit stated that it is changing over its tire yarn output to the "super super" type yarns in 1100 and 1650 deniers. The conversion will take about three months. Beaunit said the changeover has been brought about by the demands put on tire performance by increased horsepower and higher operating speeds of autos, trucks and buses.

Eiderlon Trademark Warning

Industrial Rayon has sounded a strong note of warning to retailers concerning trademark infringement and misrepresentation in connection with Eiderlon, the firm's new rayon-cotton blend knit fabric. A company spokesman said that there have been several instances in which a manufacturer has represented an inferior quality garment of an inferior rayon-cotton blend knit as being made of Eiderlon. In a letter to knit underwear buyers, Industrial stated that the registered trademark can be used only for garment identification by those manufacturers "whom we have licensed and whose production is under our quality control."

RESERVE SPACE NOW . . . .

Southern Textile Exposition

Our annual September Forecast issue will contain a complete Preview of the Greenville Textile Exposition October 6-10, 1958.

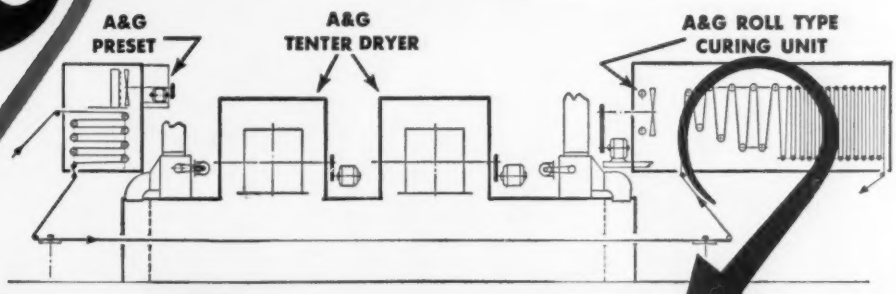
Our coverage of the show will include a list of exhibitors and the products they will show. We shall also list the names of the men who will be in attendance. Also included will be a helpful floor plan of the show.

With this double-barrelled editorial content, readership of our September issue will be wide and intense. Your advertisement will get Maximum Exposure to key men in textiles—men who make the decisions.

Write at once to reserve your space in Modern Textiles

Forms close August 1, 1958

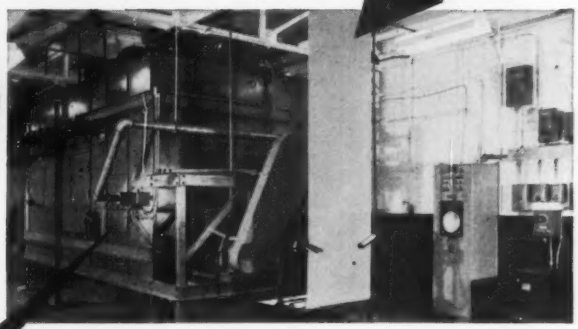
The A&G Resin Finishing Range

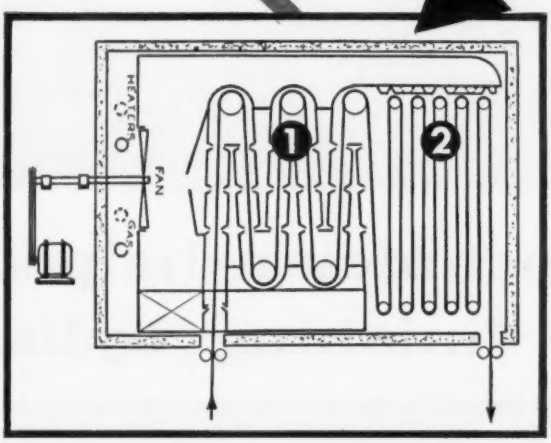


AN EVEN CURE

A SUPERIOR HAND

WRINKLE FREE





Study this A&G CURING UNIT. Note the dual zoning.

1. *Heat Up* Zone where the goods are brought up to the curing temperature quickly yet evenly. The resulting hand is superior. The cloth is in the A&G Curing Unit a shorter time, resulting in a superior hand and minimizing losses in tensile strength.

2. *Hold* Zone where the goods are subjected to the proper curing temperature for the proper length of time. Uniform temperature with maximum cloth capacity results in effective curing combined with maximum yardage per minute.

The A&G Free-Wheeling Drive eliminates wrinkle problems and minimizes width loss with trouble-free pneumatic or mechanical clutches on all top rolls.

The A&G Resin Curing Unit has made an outstanding record in many mills, both as part of the complete A&G Finishing Range and as individual units. Its efficiency and productive capacity are so outstanding that you should consider it strongly for your *next* installation . . . as a modernization unit or for your expansion program.

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No. 7 in a series—**how your Du Pont salesman is backed by many sales-building activities including Fiber Research, Technical Service, Fabric Development and Merchandising.**

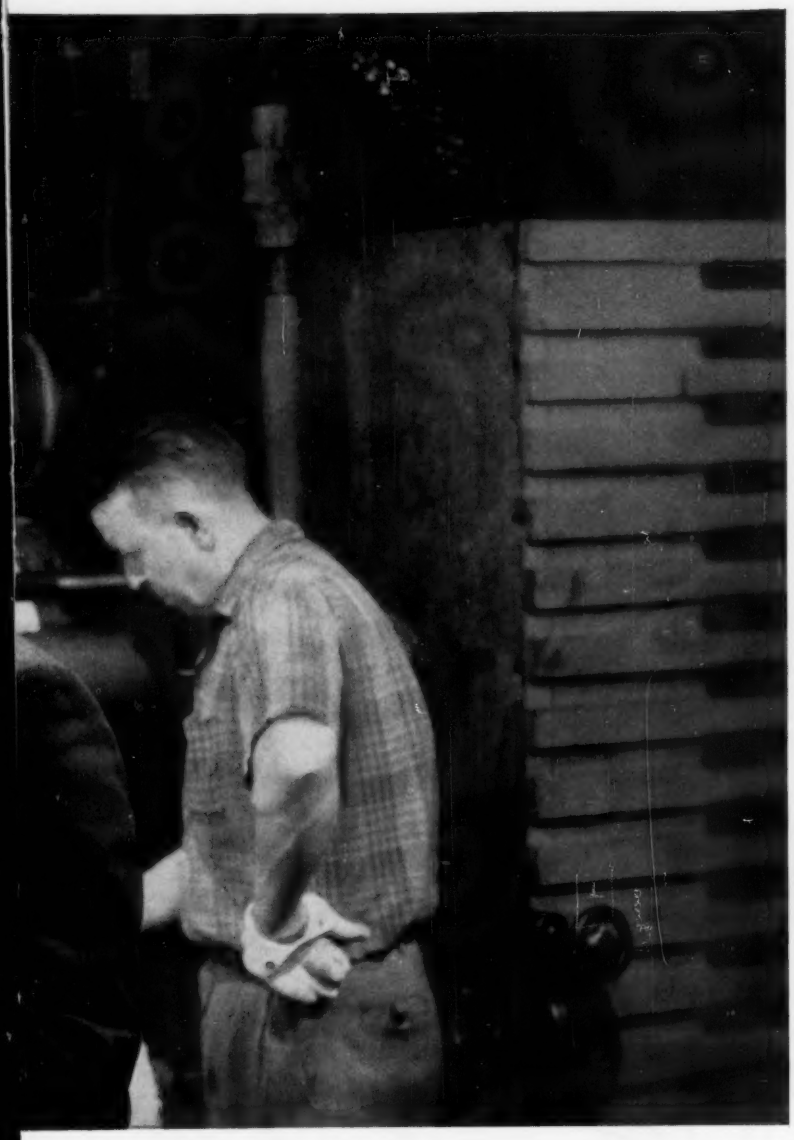
This Du Pont technician helped for finishing nylon

At left, Ralph MacIntyre, President of Joseph Bancroft & Sons Co., Inc., is seen talking with "Dutch" Sturtevant, Du Pont Technical Service representative. They're discussing a new and interesting method of finishing nylon tricot. It's a technique that may have far-reaching effects.

Developed in Du Pont's Chestnut Run Textile Research Laboratory (and made available to the tricot and lingerie industries), the process utilizes the familiar Schreiner calendering machine. Pressure and temperature adjustments are key factors.

"Dutch" played an important role in the development of this new finishing technique. He was well equipped to do so. Like many of his coworkers in Du Pont's group of 125 Technical Service men, he has a background of experience that includes intimate knowledge of specific jobs

FROM RAW FIBERS TO RETAIL SALES . . .



find a new technique tricot . . .

within the textile industry . . . the actual operation of mill machinery, for example.

This is the kind of "working know-how" that qualifies these Tech Service men to assist the industry by providing real, down-to-earth help on the processing, dyeing, finishing and use of our fibers. It's the type of assistance that the industry has found helpful whenever intricate technical problems arise.

Du Pont has always believed that the market for its fibers can best be increased by providing useful assistance to all levels of the textile industry. It's through your Du Pont salesman that you, as a customer, have ready access to a range of technical and merchandising information unique in the textile industry.

Product and Process Notes from Du Pont

Calendering Nylon Tricot—A new process for finishing nylon tricot, known as Schreiner calendering, increases covering power of tricot twofold, reduces "see-through" and eliminates extra fabric weight. A single layer of calendered tricot equals two in garments requiring double fabric shadow paneling. Heavy-knit construction used for opaque outerwear can be reduced substantially in weight, while retaining excellent covering power.

The operation consists of passing nylon tricot fabric through an engraved Schreiner calender at carefully controlled temperatures and pressures. Now, thin, lightweight fabrics can be produced with a high degree of opacity, air porosity and good bursting strength. A more effective print base can be obtained. Increased cover and the improved smoothness of calendered tricot permit a clear definition of printed patterns, allow good color register and offer more opaque backgrounds.

Detailed information about Schreiner calendering is contained in Technical Information Bulletin N-95. If you'd like a copy, write E. I. du Pont de Nemours & Co. (Inc.), Sec. F., Room 5520, Nemours Building, Wilmington 98, Delaware.

Four New Color-Sealed Acetate Shades have been developed primarily for the Fall 1958 dresswear market. These are: Empire Green, Ming Green, Sultan Red and Amberglow.

In addition, a distinct new line of colors has been assembled for the home decoration and furnishings field. Color cards, fabric color blankets and yarn samples are available through your local Du Pont Regional Sales Office.

Du Pont's No. 7 Thick and Thin Rayons, formerly produced only in deniers from 100 through 450, are now available in heavier deniers to permit broader application in home-furnishings end uses. These yarns, for example, in 900, 1800, and 2700 deniers, will impart completely new styling effects to drapery and upholstery fabrics.

Technical Information Bulletins — These Bulletins contain detailed, practical information on Du Pont product and process developments. They cover fiber properties, mill processing, dyeing, finishing and fabrication. Refer to your copies frequently; they can save you time and money. To be sure you have all the Bulletins you need—check your Du Pont salesman or Technical Service representative.

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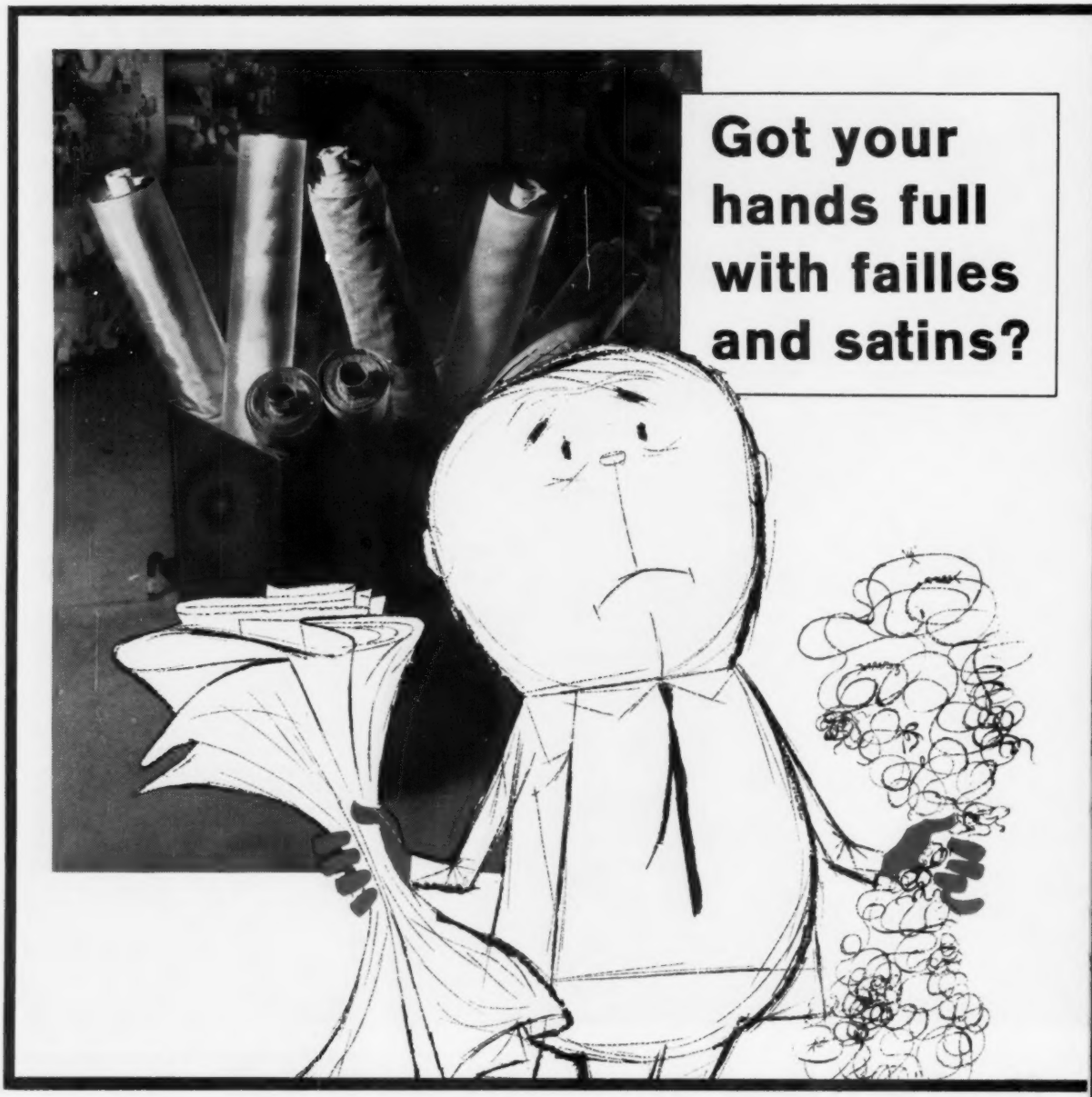


When a fabric's face is your fortune, how can you leave things to chance?

Yet, when you weave critical fabrics like failles and satins from ordinary rayon yarn, you're handing yourself many chances that knots and fluffs and slubs and dye-streaks will mar your yardage!

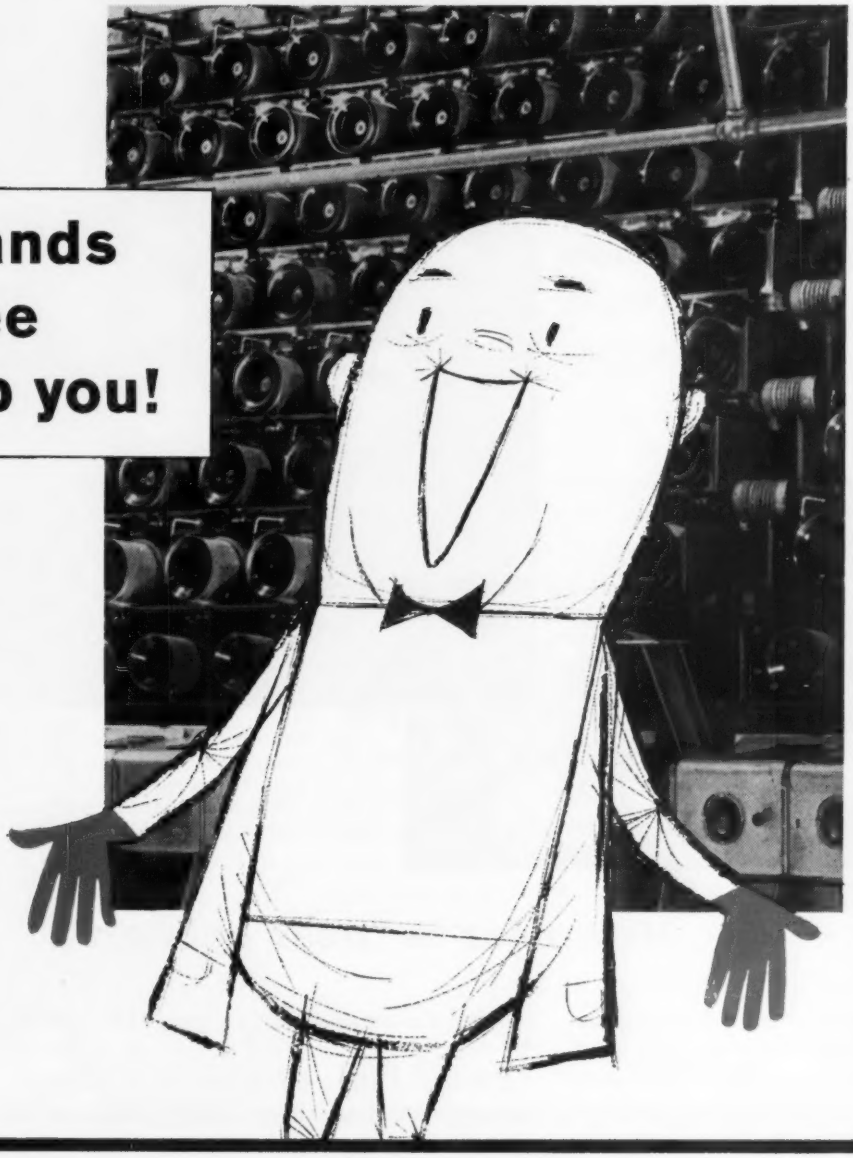
You see, ordinary rayon is handled many, many times in its processing. From the chemical treatment stages to the final coneing or beaming, hundreds of pairs of hands add to the hazards.

I.R.C. Continuous Process rayon yarn, on the other hand, is made with a "hands off" policy. It travels in a continuous thread, down a succession of "advancing reels," to its final, controlled, uniform perfection. It's as perfect as it's possible to make it.

Surprisingly enough, it costs no more!

If you'd like a hand with your critical fabric problems, just call us...or write us...or come and see our Painesville, Ohio plant. It's the only one in the entire country that can actually make a difference in your fabric production. We'll be delighted to show you how, and why, at our plant...or at yours.

I.R.C. CONTINUOUS PROCESS RAYON COSTS NO MORE... SAVES YOU PLENTY



Our hands are free to help you!

I·R·C

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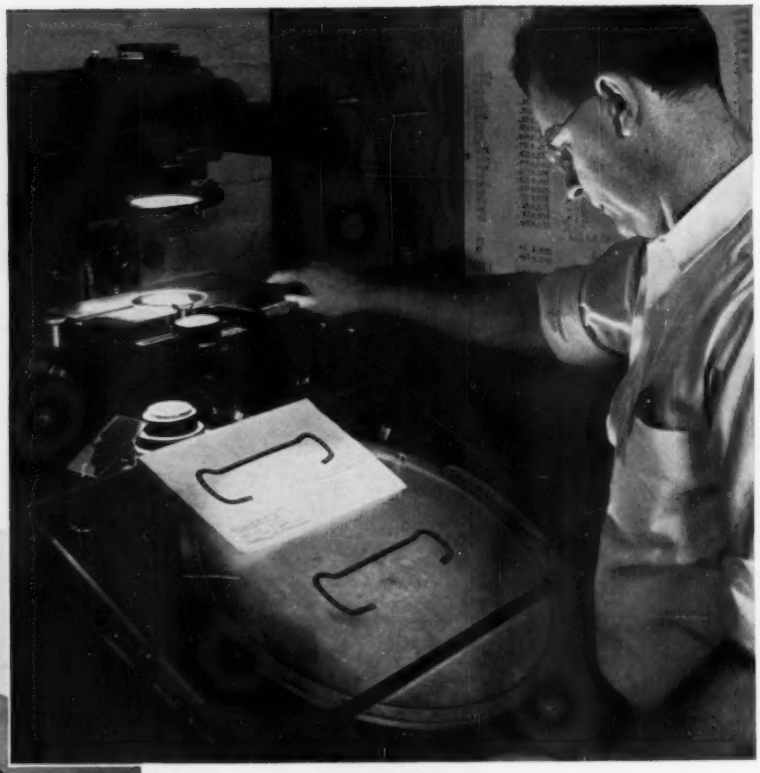
Cleveland, Ohio

Producers of Continuous Process Rayon Yarns and Tyron® Cord for Tires
Sales Office: 500 Fifth Ave., New York 36, N. Y.

BECAUSE IT'S PERFECT INCH BY INCH . . . UNIFORM MILE AFTER MILE!

When you order travelers made to exact specifications



In the Victor control center, test travelers are magnified to many times normal size on the Comparator screen, to make sure the size and shape conforms exactly to specifications. At left, microscopic inspection determines if surface quality meets required standards.

How near is "near enough"?

AT VICTOR, the travelers you order are never "near enough" until they get the okay of a modern master control center, in progressive checks that far surpass ordinary methods of inspection.

This extra measure of quality control maintains the uniformity in traveler dimensions, weight, and performance that you must have to avoid production lags. Today's high speeds, and other punishing demands placed on travelers by modern equipment, have greatly reduced the permissible "margin for error."

At Victor's master control center, the experience and skill of Victor operatives is supplemented by a series of tests, at each stage of traveler production, using the most advanced techniques and equipment. The metal, shape, weight, temper, and finish undergo thorough physical, chemical, and optical tests and inspection. Every possible control is applied to make sure that every package of Victor Travelers you receive will precisely match original specifications.

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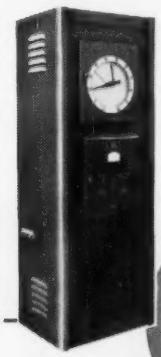

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FOR INDICATION OF O_2 OR H_2

MINOXO® INDICATOR . . . measures traces of molecular oxygen in other gases—from 1 to 10 parts per million, and from 1 to 100 PPM. High sensitivity and rapid speed of response enable it to be used for laboratory investigation and production quality control.

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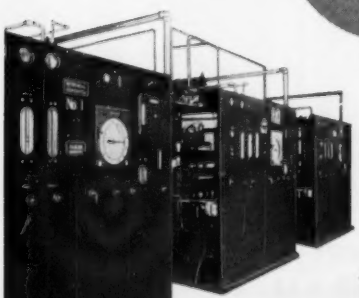

FOR PRODUCING NITROGEN

NITRONEAL® GAS GENERATOR . . . with a controllable hydrogen content—produces oxygen-free gas consisting of nitrogen, hydrogen and water vapor. Hydrogen content can be varied and maintained as desired between 0.5% and 25%.

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Saco-Lowellizing

WHAT IT MEANS....

(A) To utilize floor space so as to improve the flow of production.

(B) To co-ordinate the successive steps in processing.

(C) To reduce waste, spoilage, and unnecessary handling of stock.

(D) To realize the greatest economies in operating and maintenance costs.

WHAT IT CAN DO FOR YOUR MILL....

Specifically, you can expect *increased production* per man hour, *higher yield* from raw stock and *lower production* costs. This program creates the important improvement in quality and savings in operating expense so essential to maintaining profitable operations under today's highly competitive conditions.

Here are the results from a recent case history:

Type of Goods — 39" 80 x 80 4.00-yd. top quality print cloth

No. of Looms — 824

Production per 8-hour Shift — 6120 lbs.

Count of Warp — 31's

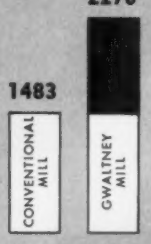
Filling — 41's

NO. OF SPINDLES	CONVENTIONAL MILL	SACO-LOWELL GWALTNEY MILL
	40,032	38,592

Man Hours per 8-hour Shift
(Opening and picking through Cloth Room)

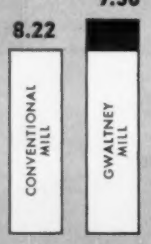
Reduction in Man-hours in Gwaltney Mill
13.98%

Spinning Spindles per Operative



Increase in Gwaltney Mill
53.06%

Pounds per Man-hour
(Opening and picking through Cloth Room)



Increase in Gwaltney Mill
16.3%

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Parfé

"Your skyscrapers don't impress me," says the Man-from-Mars on a flying trip. "Ours are in orbit around the sun.

But you could have knocked me over with an ICBM when I saw the new Parfé yarn! What Parfé would do to uplift the new Mars sack look, should happen to your own missile program!"

Parfé is Bemberg's proud new achievement! Earth-shattering is the word (and soon perhaps, Mars-shattering, too!).

Color is spaced intermittently along the entire length of Parfé yarn, introducing a new color dimension in fashion. It comes in two effects: a long span of color with wide space intervals and a short span of color with narrow space intervals. And this color is as fast to sun, laundering, and atmospheric conditions as solution-dyed shades.

Parfé can be used alone, in combination with other yarns, with Bemberg novelty yarns, overdyed, or overprinted. Feature it in dress, blouse, and sportswear fabrics (woven or knitted) and in decorative fabrics for the home.

Call LExington 2-3520... and see the yarn wonder of the world!

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Vibralon

gives **extra**
customer appeal

Place a dozen pairs of hosiery on a counter, and the superior quality of the VIBRALON-finished pair will stand out every time. Here's how VIBRALON's magic formula increases the value of nylons, gives them new sales appeal:

- **Greater snag and pick resistance**
- **Permanent matte-dull loveliness**
- **Warmth . . . absorbency**

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TO COLOR DACRON* FABRIC a better way, there's Courtaulds' super-fast color fiber Coloray. You skip the whole dyeing process that takes time and gives trouble. Because color's right inside Coloray fiber, and can't get out! It's deeper, richer color than any ordinary dye can give. And it delivers the topnotch colorfastness you must have, particularly in wash-and-wear. With Dacron or any synthetic, with cotton or any natural fiber, Courtaulds Coloray improves the blend all around! Enriches hand. Promotes yarn evenness for finer appearance. Builds in absorbency for more comfort and static-free quality to repel lint, dust and dirt. Think about it! Then go along with the growing trend to blend with Coloray.

*DuPont's polyester fiber

COURTAULDS COLORAY®

Solution-dyed rayon fiber with Captive Color..."Can't Escape!"

For further information on new fabric development and Coloray blends now available, write
COURTAULDS (ALABAMA) INC., *first name in man-made fiber, first name in solution-dyeing,* 600 Fifth Ave., New York 20 • Greensboro, N.C. • LeMoyne Plant, Mobile, Alabama

MEMO TO ADVERTISERS

Something new in September!

Right now in textiles the big need is new markets and new ideas that bring sales. Everywhere in our industry, the key men are saying: "We know how to make the stuff—the hard job is to sell it."

EMPHASIS on MARKETING

MODERN TEXTILES MAGAZINE wants to make this hard job easier. And this year in our annual September review of new developments in man-made fibers, we shall *put the emphasis on marketing.*

Our 1958 Review will be aimed directly at the people who buy man-made fibers and make them into fabrics. We are going to fill in yarn spinners, weavers, knitters, dyers, finishers and converters about the most recent and promising new uses of man-made fibers in every kind of fabric for every kind of function.

Our aim will be to alert them on how they can find those wanted new markets for their products. We're going to clue them in also on how they can bring out new products using man-made fibers.

Unlike our past fiber reviews, this September's treatment will no longer divide the fibers into separate compartments. Just as the textile industry is doing these days, we're going to jump over the fiber fences and let end use and function be our guiding rules.

We're going to give all the new trends, the emergent and potentially profitable developments affecting man-made fibers. But they'll be treated in a new way—a lively and informative way. There will be new and brighter art work, new formats and, overall, a new sparkle to our treatment.

MAXIMUM EXPOSURE

Last, but not least, our September issue will contain our revised and updated "Tables of Denier Numbers and Filament Counts of Man-Made Fibers and Yarns." There is hardly a mill, or textile designing, or sales office in the country that does not make daily use of these tables. As they were last year, the tables will be printed on a special pull-out section enlarged for easy consultation.

If you make yarns or fibers—if you make machinery and equipment—if you make dyestuffs or finishing chemicals—if you have any products or services to sell the textile industry—you'll find it profitable to advertise in our September issue.

Our new and sharpened version of our annual fiber review will guarantee your advertisement *maximum exposure* to the men who make the buying decisions in every part of the textile industry. Advertising forms close August 1, 1958.

Reserve your advertising space now for our September issue by contacting

MODERN TEXTILES MAGAZINE, 303 Fifth Avenue, New York 16, N. Y., MUrray Hill 4-0455.

What's behind Celaperm's success?

What makes Celaperm colors so right?

No gimmicks—Celaperm's secret is *shoe leather*. Endless hours covering converters and mills for every color trend. And the taste and talent to interpret them.

Celaperm is right for you:

Do you make dress goods? Men's shirtings? Draperies and curtains? Swimwear? You can style completely in Celaperm acetate—and know you're right. Right in color engineered for specific end-uses. Right in performance—color *sealed-in* for keeps. Celanese Corporation of America, Textile Sales Division, Charlotte, N. C.

Celanese® Celaperm®

Celaperm is right on the beam:

conveniently packaged for economic use—

Filament: 4 lb. cones
solid and pattern 30 x 54 inch weaving beams
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You can add years of wear

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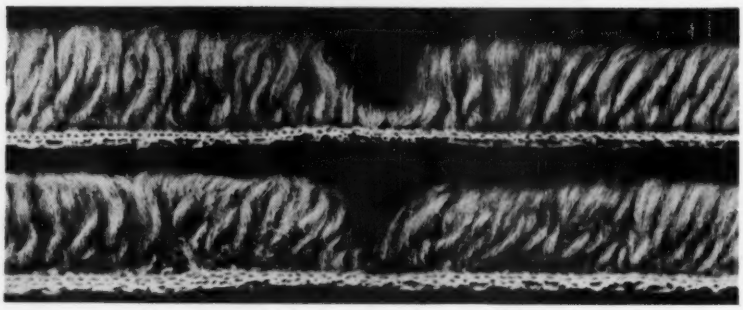
100% WOOL
at the **31,500** Pedestrian
Traffic mark.

80% WOOL/20% IRC NYLON
at the **98,000** Pedestrian
Traffic mark!

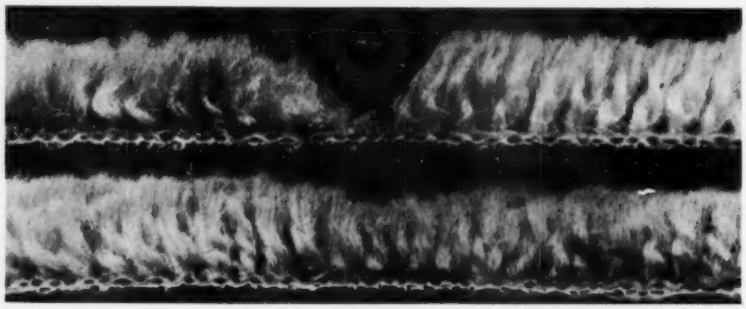
when 20% NYLON is added to wool



100% ACRYLIC FIBER
at the **72,000** Pedestrian
Traffic mark.

70% ACRYLIC FIBER/30% IRC NYLON
at the **72,000**
Pedestrian Traffic mark!

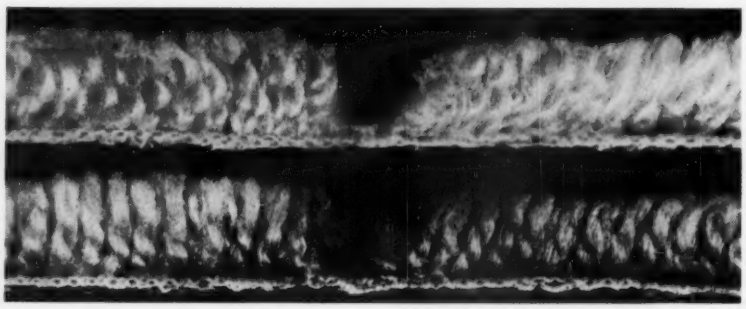
when 30% NYLON is added to acrylic fiber



100% RAYON
at the **8,000** Pedestrian
Traffic mark.

70% RAYON/30% IRC NYLON
at the **98,000** Pedestrian
Traffic mark!

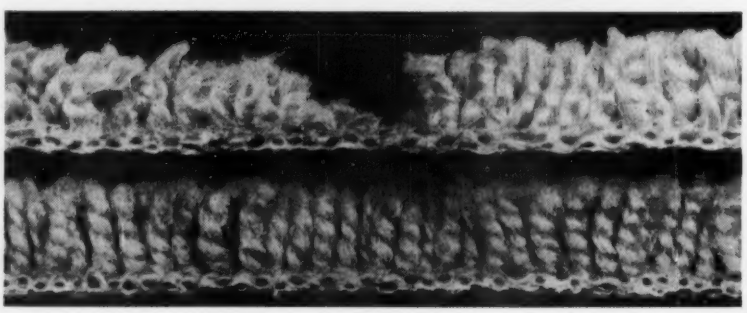
when 30% NYLON is added to rayon



100% ACETATE STAPLE
at the **51,000** Pedestrian
Traffic mark.

80% ACETATE/20% IRC NYLON
at the **65,000** Pedestrian
Traffic mark!

when 20% NYLON is added to acetate staple



to carpet made of any fiber

by blending it with

I·R·C NYLON

"How does it wear?" That's the question consumers are asking today when they buy carpeting. And here's visual proof that when you add nylon, you add long wear. Name your carpet fiber: wool, rayon, acetate, acrylic...you can improve them *all* by adding nylon. In blends, nylon adds miles of wear, years of life to carpeting made of every other fiber.

Nylon adds permanent texture and crush resistance, too. Nylon also adds *vitality* to colors—a sparkle and clarity that last the entire life of the carpet. Nylon is the fiber that adds all-around performance to carpeting.

THE NYLON FIBER DIVISION, INDUSTRIAL RAYON CORPORATION
500 Fifth Avenue, New York 36, N.Y. • 627 Guilford Building, Greensboro, North Carolina

THE NEW Nylon Staple I·R·C

Do not compare the four tests pictured here against each other. Compare only the 100% construction against the blend of the same fiber. Within each test, the 100% construction is identical to the blend in every respect but fiber content. These unpadded pieces of carpeting were laid on bare, rough steps for the toughest practical test.

FALL

SWEATER PARADE

featuring Turbo High-Bulk Orlon

Look at the fall knitwear lines — and see how Turbo High-Bulk Orlon* is leading the fashion parade in classic full-fashioned, tow-dyed, heathers and bulky knits — in fact the full sweater range for men, women and children.

For the Turbo Stapler delivers yarns tailored to knitters' specifications — denier can be altered, tensile strength increased, staple length controlled, and any desired hand achieved.

That's why so many spinners, who started with one Turbo Stapler, are now equipped with two, three or four Staplers . . . and they are planning ahead for increased production of the softest, loftiest yarn it is possible to spin.

For mills that are planning ahead with new synthetics or new fiber effects, Turbo offers its facilities for experimental work. Talk to a Turbo engineer.

*DuPont T.M. for its acrylic fiber

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SINCE 1929

TURBO MACHINE COMPANY

Makers of precision Heat and Steam Setting Machines, Crimpers and Tow Processing Equipment

LANSDALE, PA.

Southern Representative: Parrott & Ballentine, Greenville, S. C.

MODERN TEXTILES
Magazine

Publisher's Viewpoint

The dilemma of our textile schools

In recent years, thoughtful persons in textiles have been deeply concerned over the growing problems of our textile technical schools. The heart of the troubles which beset the industry's specialized schools lies in the fact that their enrollment of new students declined sharply at a time when college enrollment generally was booming on, year after year, to new highs. In an era when colleges and universities were turning away applicants by the hundreds, the textile schools were suffering an average decline in enrollment of full-time students of 3% a year, and of night students 13% a year.

Deeply worried by this trend, ten of the textile colleges joined together to take action to reverse it. As a first step, they, like good educators, sought knowledge of their own predicament—they wanted the facts, no matter how painful, that would enable them to know fully the extent of their troubles so that they might begin a course of cure.

The colleges retained Arthur D. Little, Inc., the industrial research consulting company, to make a survey of the needs of the textile industry so that the colleges could reshape their curricula to meet these needs effectively.

No Easy Solutions

The results of the survey, published last month in a 228-page report, do not point to any easy solutions for the textile colleges. The report does, however, define precisely for the first time in years the nature of the difficulties facing the colleges; and it does indicate some directions in which progress may be made to escape these difficulties. Every person engaged in an executive level in textiles, whether in mill management or in merchandising, who wishes to see our industry's well-being advanced should make a point of reading the Little Report. *(Requests for copies addressed to this magazine will be forwarded to the report's sponsor, the National Council for Textile Education.)*

Incidentally, there is heartening news in the report along with its accumulated data on the very real problems of textile education. As part of the survey, a questionnaire was sent out to 9,200 textile school graduates who had entered industry between 1932 and 1956. It was learned that ultimately annual earnings of textile college graduates are as *high or higher than that of major types of engineering graduates.* Starting salaries, however, were less than that of other engineers.

Another encouraging fact elicited by the report is that 60% of textile college alumni remain in the textile industry while 23% go into textile-related industries.

A Step Toward Greater Usefulness

It is indeed good news that the American Textile Machinery Association has opened its membership to manufacturers of knitting machinery. And in a further step to broaden its representation in the field of textile machinery, the association has set up associate memberships for firms making textile auxiliary equipment.

James H. Hunter of Hunter Machine Co., North Adams, Mass., president of ATMA, has announced that the association welcomes applications from firms who consider themselves eligible as members or associate members under the new program.

It seems to us that the decision of ATMA thus to broaden its membership is a wise one. American textile machinery makers have made, over the decades, an immeasurably beneficial contribution to the steady progress of our industry. Broader membership in the textile machinery makers' trade association is bound to contribute to the increased vigor of this group, and help in time to win greater appreciation for the good work done by its members.

A. H. McCullough

OUTLOOK IN TEXTILE MARKETING

By the Editors

Man-made fibers dominate home furnishings show

How deeply man-made fibers have penetrated the carpet industry is shown by the latest figures on fiber consumption in floor coverings.

According to the Carpet Institute, synthetics last year accounted for 44% of the fibers used in floor coverings, a long upward jump from the 32.8% in 1956. Wool last year amounted to 44% of fibers used in carpets, down from 50.8% in 1956.

In terms of yardage, man-made fibers went into 55 million square yards of carpets (10 million of these were wool blends). All-wool amounted to 49.5 million square yards, and cotton 8 million.

Along with the fiber upheaval, the 1957 figures confirm a revolution in manufacturing methods.

For the first time, tufted floor coverings outproduced woven. Including an estimated 13 million square yards of auto and airplane carpet, tufted fabrics amounted to 69 million square yards, a sharp jump up from the 54.5 million turned out in 1956. Woven production was 56.3 million square yards compared with 63.9 million manufactured in 1956.

Meanwhile, as tufted carpet output increases, knitted carpets are also appearing.

While no figures are yet available, more and more mills are getting into production of knitted pile carpets. Most of them are using the Raschel type carpet knitting machine developed by Kidde Manufacturing Co. One large manufacturer has been producing knitted carpets in substantial quantities for eight years. It is reported that at least 10 major carpet manufacturers now have Kidde machines in their plants. (*Next month MTM will publish a special report on the Kidde carpet knitting machine, its advantages and functional characteristics.*)

In Chicago last month there was further proof of the overwhelming importance of man-made fibers in home furnishings.

Visitors to the June market displays at the Merchandise Mart saw man-made fiber fabrics in the lines of virtually every carpet, upholstery and drapery manufacturer.

Among the "firsts" at the market was the appearance of Celanese's new twist-set acetate carpet staple, "Celaire", combined with nylon. Five mills have been licensed so far to use the "Celaire" trademark. The acetate content of their carpets ranges from 70 to 80% with nylon making up the remainder of the pile yarns.

Celanese's licensing agreement requires that at least 50% of the pile yarns be twist-set acetate 17 denier staple and that the other pile yarns be capable of twist setting. Other parts of the licensing agreement fix minimum requirements for backing, resistance to abrasion and soiling, color fastness and ability to withstand commercial shampooing.

Another "first performance" was shown at the American Viscose exhibit.

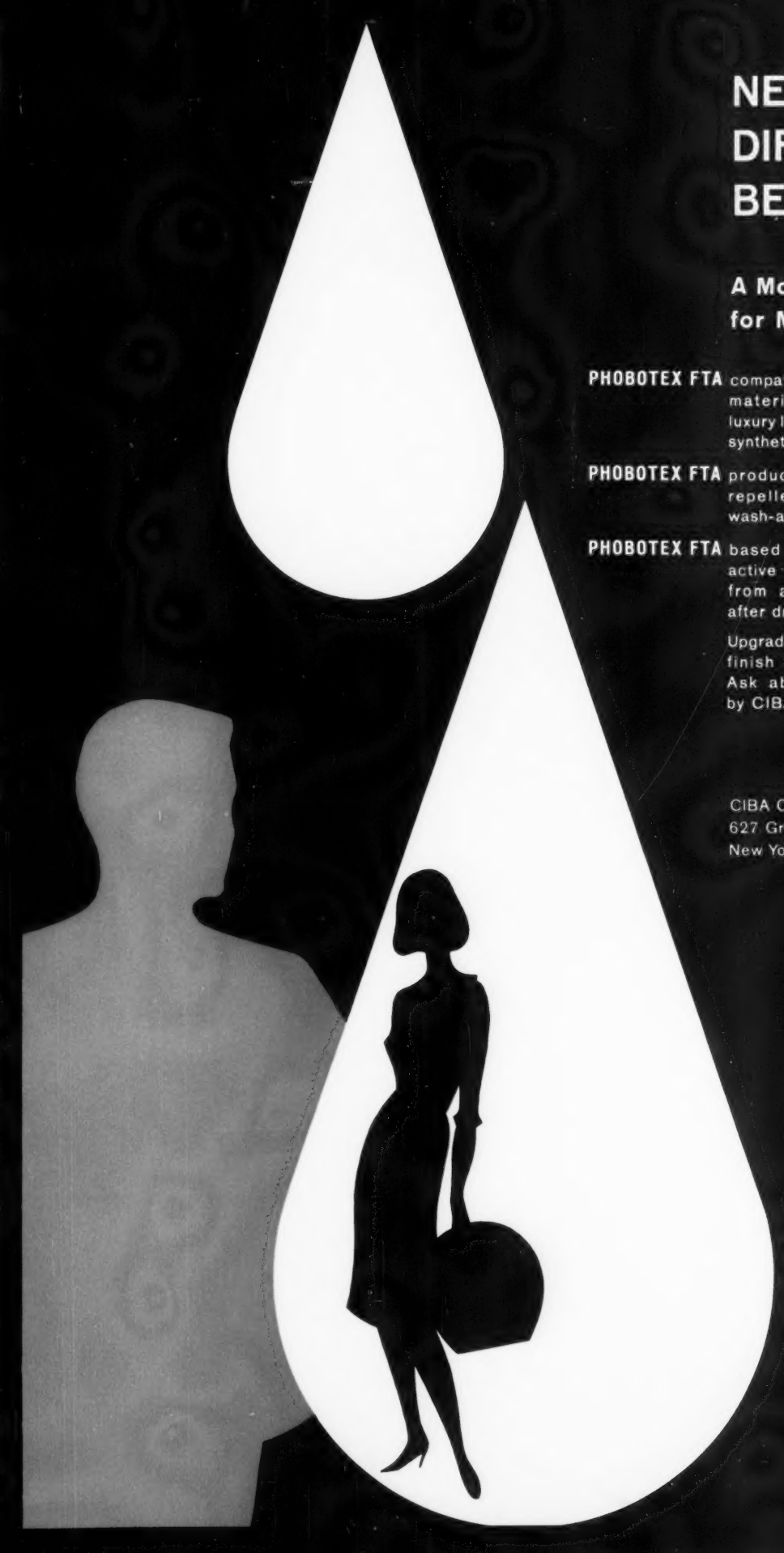
On display were samples of carpet made of the company's solution-dyed "Super L" carpet rayon staple fiber. Super L is reported by American Viscose to wear 108% longer and to resist soiling 35% more effectively than ordinary carpet rayons. Incidentally, a knitted carpet, the first in this construction to be offered by Hightstown Rug Co., uses Super L Rayon in a loop pile fabric priced at $6.95 a square yard in 9, 12 and 15 feet widths.

At Chicago there was also news about Acrilan.

Chemstrand, Acrilan's producer, announced that nine mills have signed licensing agreements designed to maintain performance standards of carpets made with this acrylic. Heart of the agreement is a commitment to use a minimum of 70% Acrilan in face yarns; to limit the use of other fibers to carpet grade wools or man-made fibers having no more than a 5% moisture regain at 70°F. and 65% relative humidity.

In upholstery fabrics as well as carpets, there was fresh style news made by man-made fibers at Chicago.

As an instance of these new things, Allied Chemical's "Caprolan" nylon appeared in the upholstery of a number of new lines offered by furniture makers. Some of these nylon fabrics were with texturized filament yarns. Among the Caprolan fabrics that received interested scrutiny from buyers was a jacquard pile fabric woven by Baldwin for Kroehler; several Collins & Aikman cloths, including "Gate" a new fabric with texturized Caprolan in the surface—the first of the new "curled yarn" fabrics to reach the market.



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PHOBOTEX FTA compatible with other finishing materials for a full hand and luxury look on cotton, rayon, wool, synthetics and blends!

PHOBOTEX FTA produces a washfast water-repellent finish, gives lasting wash-and-wear properties!

PHOBOTEX FTA based on a thermosetting reactive resin, applied by padding from an emulsion and cured after drying!

Upgrade your fabrics with the finish that keeps them new. Ask about PHOBOTEX® FTA by CIBA.

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CIBA

Amerotron is profitable and gaining in stature with every passing month. The man who is largely responsible for this growth in prestige is Edmon G. Luke, a master of the complicated skills of selling gray goods.

He put Amerotron in the black

By Jerome Campbell
EDITOR, MODERN TEXTILES MAGAZINE

WHEN ROYAL LITTLE, a few years ago, worked out the incredibly complicated and often agonizing arrangements that led to the merger of Textron, American Woolen and Robbins Mills, there was a feeling among many in the industry that the new company fashioned from those not-too-healthy components would somehow not be assured of a long life. Prevalent in the industry was a feeling that there was something a little unreal about the whole transaction; textile people feared that perhaps one night a big wind might spring up and blow away the whole improbable structure of the new Amerotron, leaving nothing but a variety of supercharged and expensive vice presidents studying their contracts in the cold light of a new day.

Since that clamorous and crowded press party at the Plaza Hotel in New York City early in 1955 when Amerotron introduced itself and its vice presidents to the world, a lot of water has poured over the textile dam. But Amerotron has survived and prospered and acquired impressive stature in the industry. In the process, it has sloughed off virtually all the obsolete plants that came to it from that ailing *gigantosaur* of textiles, American Woolen, and it has divested itself of most of the plants that were part of Robbins.

The new Amerotron which has emerged from these pruning and streamlining operations is a modern, cannily market-minded gray goods operation that functions profitably, and, with every passing month, gains in the good opinion of the converters who are its customers. Along Seventh Avenue and over the tables of the Opera Luncheon Club they will tell you that the lion's share of the credit for Amerotron's profitable adaptation to the rigors of today's textile climate must go to Edmon G. Luke, a man unsurpassed in the industry for mastery of the delicate arts of selling gray goods. And the key people on Amerotron's own staff agree.

Actually the work of building the successful Amerotron of today goes back a few years before the great merger of 1955. The merger in fact contri-

buted little to this work of forging out of the old Textron the modern Amerotron; it may, indeed, have delayed and made the task more difficult. But difficult or not, the work of creating out of Textron and the salvageable elements of American Woolen and Robbins, the Amerotron of today is completed to the satisfaction, it should be noted, of Royal Little, chairman of the board of Amerotron's parent company, the many-faceted and highly diversified, Textron, Inc. At a meeting in May, Little told stockholders that Amerotron's sales currently accounted for 25% of Textron's total volume and that the textile operation of the parent company was a profitable one. A closer look at Amerotron's activities reveals that it is doing a synthetics gray goods business of $55 million a year on an $8 million inventory—a turnover of close to a virtually miraculous seven times. Added to this, of course, is the finished cloth volume of the company's brand new Barnwell, S. C. woolens plant.

Sound Principles of Merchandising

This healthy state of affairs results from the steadfast application by president Luke of the sound principles of gray goods merchandising he has learned in a lifetime of successful fabric selling. He is a man whose life is built around the principles of consistent, reliable conduct, of loyalty and devotion to his friends and customers. In his achievements at Amerotron, Ed Luke has proven that these steadfast principles are the best way to sell gray goods. When he came to Textron in 1953, to take charge of the gray goods operation, his first task was to clear away the cumbersome debris of Textron's recently abandoned and once tremendous effort to operate as an integrated manufacturer turning out not only finished fabrics, but also a wide range of garments.

He was the right man for the job in a number of important ways. Not the least of these was his deep-rooted conviction that a textile mill company should keep out of integrated operations and stick to making gray goods. "I'm a gray goods man," he says, "and I always have been one."

At Textron, Luke's first task was to build up the quality of the company's gray goods so that they could take their place without apology alongside the best in the market. To do this, he put the company's mills in order by cleaning out inefficient practices, and hiring able plant supervisors. In New York, he took charge of the sales force, recruited new and competent men where they were necessary, and in general, began enriching the whole selling operation with the fruits of his thirty plus years of experience as a successful gray goods merchandiser.

Learned Selling at Father's Knee

Edmon George Luke literally learned about selling cloth at his father's knee. His father, Edmon C. Luke was for 25 years a salesman in the fine goods division of William Whitman Co. at 261 Fifth Avenue in New York City. It was inevitable that the younger Luke, who had a great admiration for his father, should look with favor on a job in textiles when he graduated from Rutherford (N. J.) High School in 1921.

Dad got him a job as a trainee in Whitman's big Nashawena Mill in New Bedford (5,200 looms in one weave shed) and after learning by doing for six months how yarns and fabrics are made, young Luke got his first job in the New York market with Turner & Walls as a stock clerk. Soon he was out selling for Kerr & Callahan by days and learning about fabrics at night in courses at Textile Evening High School. He continued his after hours studies at City College down on Lexington Avenue at 23rd Street attending the classes of James W. Cox, Jr. a teacher who is fondly remembered by so many New York textile men.

In 1928, when he went to work for Bruns-Nordeman, the cloth brokers, Ed Luke, although only 25 years old, was a seasoned cloth salesman, equipped with a knowledge of the technical side of textiles, and beginning to get clear in his mind the broader and basic strategies of successful gray goods marketing. Ten years with Bruns-Nordeman led to a series of new business associations in which Luke with steady growth in personal prestige in the fabric market put to successful use his by now formidable abilities as a fabric merchant.

In 1951, after ten years as manager of the man-made fabrics department at Bates Fabrics, Inc., he joined Fox-Wells-Luke, Inc. In this post, he added to his already vast experience representing New England Mills, the selling for a number of Southern mills such as Haynesworth and Peerless. In 1953, when Textron acquired Peerless, Luke became a Textron vice president.

By 1955, when the American Woolen, Robbins merger took place, Ed Luke had pretty well whipped into shape the Textron gray goods operation. The mills he supervised were turning out good cloth that was being sold profitably. The merger, of course, brought new problems, largely arising from the question of what to do with the finished goods operations of American Woolen and Robbins. In time these, too, were cleared away.

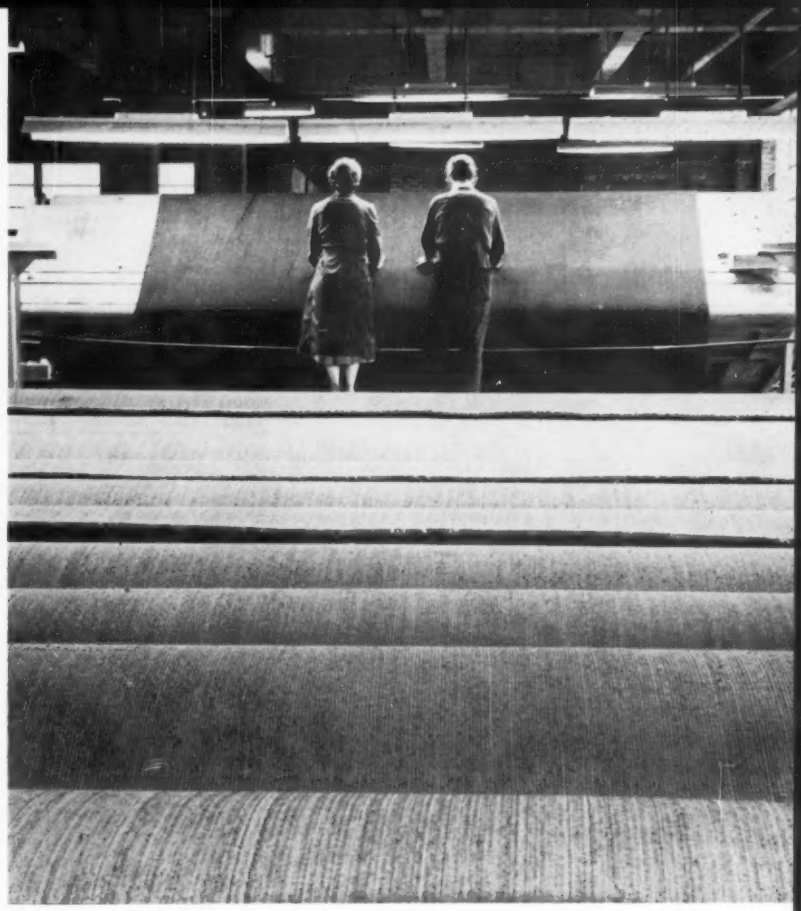
The 120-Hours a Week Pledge

In August, 1956, Amerotron announced a new policy, and its announcement is one of the things Ed Luke is proudest of in his long career as a fabric marketer. The company in public statements pledged to operate its synthetic gray goods looms not more than 120 hours a week—five days only each week on a three-shift operation. The policy is still strictly adhered to.

Behind this policy of curtailed operation is the desire to set a good example in checking the overproduction of gray goods at a time when the market cannot profitably absorb such overproduction. The policy fits in with Ed Luke's convictions that strict inventory control is necessary in today's textile market if mills are to operate profitably. The 120-hour policy also shows the world that Amerotron is anxious to uphold the entire price structure of fabrics from mill right through the finished goods operations of converters.

Needless to say, Amerotron's courage in pledging itself to 120 hour a week operation has won many friends for the company and many friends for Ed Luke. The new policy has done much to erase the old, reputation of Textron as a fabric producer that believed in running full and piling up gray goods without regard to the bad effects such practices had on the whole delicate structure of synthetic gray goods marketing. For example, in the period preceding the announcement of August, 1956, Amerotron's gray goods mills had been weaving steadily on a six day week operation for two years without even an interruption for mill workers' vacations.

(Continued on Page 41)



DOWNHILL WORK—At Birstall Carpet Co. in Birstall, Yorkshire, rolls of finished fabric move down an incline to the inspection table. The carpet is passed over the table during inspection and re-rolled on the far side.

Tufting moves forward in England, too

By Special Correspondent

THE BRITISH tufted carpet industry is now entering its second stage of development. Initially, just over two years ago, production techniques and equipment had to be evolved. This has been done, and some manufacturers are claiming tufting efficiencies of 70% and over.

Now, although most tufters are trying to keep prices down by whittling overhead and streamlining production, the trend is towards better quality products and consequently higher cost. Low price is taking second place to sales appeal. Tufted carpets are moving into more direct competition, in Britain at least, with woven Axminster and even Wilton products.

Multi-colors and patterning are two of the latest developments. One yarn supplier, Taylor and Hargreaves Ltd., Bacup, has revised an old dyeing technique called skein-shading to produce two-color yarns. In this process the yarn is skein-dyed, the skeins being first partly dipped into one vat, then taken out and the undyed part of the skein dipped into a second vat containing a different color. Yarns so colored when tufted into a carpet produce a random pattern effect of a background color streaked with a second color. By varying the proportion of the skein dipped into the different vats, one color can be made more, or less, predominant in the finished carpet.

Yarns of this type are more expensive because of the extra work required in their dyeing. But much of this added expense can be overcome when large quantity dyeing brings the economies of large scale production into play.

If one of these two-color yarns is used in alternate needles of a tufting machine, and an ordinary one-color yarn in a third color is used in the other needles, a three-color effect is obtained in the finished carpet. Naturally the number of variations of this technique is considerable.

Taylor and Hargreaves have the actual skein-shading done by commission dyers. They themselves are spinners, and offer to the tufted carpet trade these yarns as 0.95s singles, all-viscose or wool mixtures, on predetermined length, guaranteed knotless cones up to 7-lbs weight.

Predetermined length cones cut waste, caused when tufting from cones carrying unequal lengths of yarn, and offer a far better alternative to "top and tailing". They are produced with the aid of 72 thread measuring counters supplied by a German firm, J. Hengstler KG. These counters are attached to the cone winding machine and can be set to any desired number of meters up to five figures. When the correct length has passed through the counter, automatic scissors cut the yarn. The counters weigh little over two pounds and are only 1 15/16-in high.

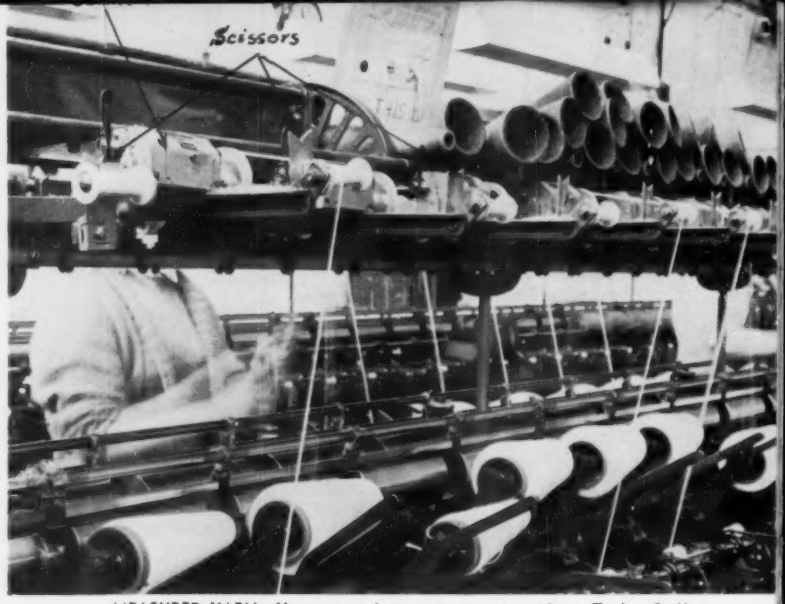
Another recent development in tufted carpet yarn is used in a range marketed by the Seamless Axminster Co. Ltd., Bolton. Called the "Seatuft" range, these

carpets are tufted in wavy lines and incorporate up to four colors. Two, two-color yarns are used in each carpet. Each of these yarns is basically one color with a splash of contrasting color spun in at random intervals. The spinners who produce these yarns for the "Seatuft" range are J. & J. Hayes Ltd., Leigh. At the moment they are patenting the special, extremely cheap process which allows the introduction of this splash of contrasting color in the yarn.

At least one British manufacturer is producing a "powder of four colors" effect by tufting from a yarn doubled from two yarns, each of which has been spun from two different colors of staple.

But probably the most interest aroused in the British tufting industry in recent months has been caused by the advent of tufted carpets with printed patterns in up to four colors. The Stalwart Manufacturing Co. Ltd., Bacup, is patenting a machine for printing tufted carpets in up to three colors. At the moment, with the first unit to go into commercial production, only 54-in widths can be handled, but a director of the company and co-inventor of the machine, W. G. Farrer, forecasts they will be able to print widths up to 108-in within three to four months.

The Stalwart unit is based upon a roller printing technique, the result of 15 months research and experiment during which time several other methods were tried but found lacking in efficiency. The roller method will print all but the most intricate designs with penetration to the bottom of the tufts and a fineness of register as good as that of textile printing in other fields. Printing carpets of blended yarns does not present any special problems if identity of the fibers is known. The company claims that color fastness is comparable with that of woven carpets.



MEASURED YARN—Yarn measuring counters are used on Taylor & Hargreaves cone winding unit to produce predetermined-length cones for tufters.

Definition of pattern is excellent, and even more precise than that found in a woven carpet because it does not have the stepped effect at the edges of the design caused by the individual woven tufts. This clean-cut patterning provides an additional selling point.

Another company which has developed a successful commercial printing unit is British Tufting Machinery Ltd., Blackburn. This unit is capable of printing up to four colors. World patents are still pending, so full details are not available. Again a roller technique is used; in this unit the roller is of a plastic material.

Problems arising from "hardening-up" of the carpets owing to the printing pastes, have been overcome, and it is possible to meter the dye to avoid waste. Patterning attachments are changed quickly and simply. This machine also prints widths up to 54-in, and the company is working on facilities for up to 12-ft wide. An interesting feature of the method is that by deliberately overlapping the colors it is said to be possible to produce six different shades on one carpet.

British Tufting Machinery offers two units, one for printing with Cibacron and Procion (reactive) dyes, and one for non-reactive dyes. Daily runs averaging 16 yards per minute are claimed. Printing on both Stalwarts' and British Tufting's units increases cost by only about fifty cents per square yard for up to three colors. ■

FULL WIDTH SUPERVISION—Tufting machine supervisor at Lancashire Felt Co. sits on specially constructed seat which can slide across the width of the machine to make her work easier.

DYEING and FINISHING SECTION

"NATIONAL" PERFORATED APRON CONVEYOR DRYER

Evidence of the outstanding efficiency and economy of this "National" drying unit is found in the number of existing and on-order installations among the Nation's leading chemical manufacturers.

Increased drying capacity per square foot of surface; improved uniformity of dried product; much easier apron cleaning; greater efficiency and accessibility of gas or steam heaters; and a generally neater machine to operate and maintain, are characteristics of this drying system resulting from unique and exclusive features of "National" design, construction, operation and control.

The same type of dryer is used for the drying of starch, rubber crumb and a wide variety of chemicals and pharmaceuticals.

The following well-known companies are among the current users of "National" Perforated Apron Conveyor Dryers:

AMERICAN VISCOSE CORPORATION

ARMOUR & COMPANY

DU PONT COMPANY OF CANADA (1956) LTD.

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BLEACHING
PRINTING
SPECIAL
PROCESSING

Arnel staple in wash-and-wear cloths

By Howard F. Elsom & Werner A. Schoeneberg
CELANESE CORP. OF AMERICA

ARNEL®, Celanese's triacetate fiber, is especially suitable as building material from which can be constructed wash and wear fabrics that have optimum value and performance. Properly constructed fabrics from Arnel may be durably creased or pleated, possess excellent dimensional stability, are resistant to wrinkling and dry quickly. More importantly, one of Arnel's outstanding characteristics, a high initial modulus in a hot-wet condition, is a major contributing factor to the prevention of wrinkling during laundering. Also, Arnel is thermoplastic and accordingly, hot air tumble drying of laundered garments assists the removal of wrinkles.

Wash and Wear Constructions

Examples of fabrics which have been made from several Arnel blends and which possess excellent wash and wear features are shown in Figures 1 and 2. Each garment was machine washed at 120°F., extracted and tumble dried five times in succession prior to photographing. None of the garments was pressed after laundering. Figure 1 shows a pleated skirt constructed from 55% Arnel and 45% high tenacity rayon in a 3.5 oz/sq. yd. challis construction. The trousers and jacket shown in Figure 2 represent a 5.3 oz/sq. yd. cord suiting made from a ground of cotton warp with the cord and filling yarn made from a blend of 65% Arnel with 35% Du Pont Dacron® polyester fiber. A third fabric consisting of 55% Arnel with 45% combed cotton in a 4.5 oz/sq. yd. twill weave, which is not shown, also has excellent wash and wear performance and maintains pressed-in pleats and creases when washed. Construction details for these fabrics are listed below:

Style No. 1—55/45 Arnel/Rayon Challis

Warp:	30/1 (20Z) 55% 2.5 dpf. x 2" brt. Arnel 45% 1.0 dpf x 2" H.T. Rayon (Type 2, a product of North American Rayon Co.)
Filling:	Same as warp
Reed:	33/2
Reed Width:	50.9"
Picks/in. on loom:	60
Finished Width:	48"

Style No. 2—50/30/20 Arnel/Dacron/Cotton Cord Suiting

Warp:	2 ends, 42/1 (26Z) 1⅛" combed cotton 1 end, 30/3 (19Z x 16s) 65% 2.5 dpf x 2" brt. Arnel 35% 1.5 dpf x 2" S.D. Dacron
Reed:	25/3
Reed Width:	50.9"
Weave:	1/1 plain
Picks/in. on loom:	60
Finished Width:	45"

Style No. 3—55/45 Arnel/Cotton Flannel

Warp:	22/1 (18.5s) 55% 2.5 dpf x 1½" brt. Arnel 45% 1 3/16" S.M. combed cotton
Filling:	Same as warp
Reed:	38/2
Weave:	3/3 Right Hand Twill
Picks/in. on loom:	66
Finished Width:	41"

Blend Ratios and Yarn Counts

Extensive experience has shown that at least 50% Arnel should be present in blends with either cotton or rayon in order to produce fabrics which have durable pleat and crease retention properties to laundering. In blends with the cotton, up to 22/1 c.c. yarn has been found to weave satisfactorily as warp. In blends with H.T. rayon, up to a 30/1 c.c. yarn has been found to be satisfactory for warp. The increased warp yarn count of Arnel/H. T. rayon blends over that feasible with Arnel/cotton blends is due to the greater elongation of Arnel/H. T. rayon blended yarns (17% vs. 7%).

Spinning and Weaving

Arnel/cotton blended yarns may be processed by opening the Arnel stock and passing through a one process two-beater picker. The Arnel lap is carded on a flat top card set for processing typical synthetics (mote knives removed, a synthetic licker-in and solid screens). Blending of the Arnel sliver with combed cotton is accomplished by three drawings with ten ends up. Yarns are spun using either double apron spinning systems with 2½" rings or single apron drafting, cotton spinning frames.

The Arnel/Dacron yarns are prepared by pre-opening Dacron stock through one beater of a one-process picker. Arnel and pre-opened Dacron are sandwich blended at the front of the picker. Carding is accomplished on either roll or flat top cards set to process synthetics. Drawing, roving and spinning operations are carried out on conventional equipment set to handle 2" stock. Both Arnel/cotton and Arnel/rayon spun yarn blends are woven on conventional light weight, single shuttle looms. The Arnel/Dacron/cotton cord suiting is woven with a single shuttle on a box loom from 2 beams. Sizing of the singles yarns, either Arnel/cotton or Arnel/rayon blends, is necessary. The use of modified water soluble starch either in conjunction with a small quantity of polyvinyl alcohol works well. Other starch sizes requiring enzyme desizing are also satisfactory.

Dye at High Temperatures

Typical procedures for dyeing Arnel/rayon, Arnel/cotton and Arnel/Dacron/cotton blends using syn-

Figure 1—Pleated skirt of Arnel/H. T. Rayon Challis after 5 washings and no pressing.

TABLE I

Dyeing Procedure for 55/45 Arnel/H.T. Rayon Challis (Style No. 1)

1. Boil Off on Hennekin—35-40 yds/min.
   @ 205°F.—½ g/1 Trepenol ES
2. Dye on winch
   0.14% (owf) Lenra Yellow R
   0.014% (owf) Chlorantine Yellow 2GLL
   1 g/l. Quaker 2700
   ¾ g/l. Tamol N
   10 g/l. Common Salt
   Dye four hours at 203°F.
3. Rinse and take out from salt bath.
   Tenter dry to 47 inches
4. Heat treat on Morrison 2-roll unit at 415°F fabric temperature—45¾" width.

thetic dyehouse procedures are shown in Tables I, II, III. Proper choice of disperse dyes for dyeing Arnel is important to the achievement of maximum colorfastness. Typical dyes which yield good fastness on Arnel are shown in Table IV. It is advisable to use a small quantity (0.3 - 1.0%) of inhibitor with the dyeing to prevent possible fading due to ozone. Permalene AF or Conco Inhibitor FR are among several which have been found satisfactory. Dyeing temperatures should

Figure 2—Arnel/Dacron/Cotton cord suiting after 5 washings and no pressing.

TABLE II

Dyeing Procedure for 50/30/20 Arnel/Dacron/Cotton Cord (Style No. 2)

1. Hinnekin Boil Off at 205°F.—35 yds/min.
   ½ g/l Trepenol ES
2. Bleach on Winch
   8 gms/l of 50% hydrogen peroxide
   3 g/l sodium metasilicate
   0.25 g/l wetting agent
   Raise to 176°F. in ½ hour
   Run at 176°F. for 1 hour
   Rinse in warm water
3. Dye Cotton on Winch (600 liter volume)
   1.75% (owf) Cuprophenyl Black RL
   1 g/l Quaker 2700
   ¾ g/l Tamol N
   ¼ g/l Sequestrene NA4
   10% (owf) Salt
   Dye 2 hours at 176°F.
   Rinse; after treat
   1½ g/l Copper sulfate
   1½ g/l Formic acid
   Run ½ hour at 140°F.
   Rinse
4. Dye Arnel/Dacron on Jig
   3.8% (owf) Eastman Blue B-GLF
   0.22% (owf) Polyester Red FL
   0.22% (owf) Artisil Orange GFL
   7.0% (owf) Dysyn 427 A (4 g/l)
   1.7% (owf) Igepon T
   Dye 4 hours at 203°F. in covered jig.
   Rinse well.
5. Frame dry, singe and heat treat at 385°F. fabric temperature on 2-roll Morrison unit.

   Width before heat treatment: 43¾"
   Width after heat treatment: 39¾"

TABLE III

Dyeing Procedure for 55/45 Arnel/Cotton Flannel (Style No. 3)

1. Hinnekin Boil Off at 205°F.—35 yds/min.
   ½ g/l Trepenol ES
2. Bleach on the jig (200 liters)
   4 qts. of 50% hydrogen peroxide
   2 lbs. Borax
   2 lbs. Trisodium phosphate
   0.5 lbs. Wetting agent
   Raise to 203°F. in ½ hour
   Run at 203°F. for 1½ hours
   Rinse in warm water
3. Dye on Jig (200 liters)
   —Arnel Portion
   5 g/l Emkalar DA
   2 g/l Emkatex 49P
   2 g/l Tamol N
   0.5 g/l Igepon T
   1.3% Eastman Blue BGLF
   0.8% Latyl Blue BG
   1.0% Conco Inhibitor FR
   Start at 50°F. Raise to 203°F.
   Run at 203°F. for three hours
   Rinse, scour and add fresh bath.
   —Cotton Portion
   2.5% Procion Brill. Blue R
   Run ¼ hour cold
   Add 30 g/l Salt
   Run ½ hour cold
   Add 6% (owf) trisodium phosphate
   Run 1 hour cold
   Rinse
   Soap at boil with non ionic
4. Frame dry
5. Heat treat on 2-roll Morrison unit at 410°F. fabric temperature.

be as close to the boil as possible in order to reduce dyeing time. Heavy shades on Arnel should be dyed in the presence of dye accelerants containing methyl salicylate, ortho-phenyl phenol or other combinations. Total winch dyeing time generally runs 4 - 5 hours for light to medium shades, and 6 - 8 hours for heavy shades.

The rayon portion in spun yarn blends with Arnel may either be reserved, cross or union dyed with direct dyes in the same dyebath used for dyeing Arnel, provided dye accelerant is compatible with salt. Appropriate fixable direct colors which do not stain acetate or Arnel are employed for dyeing the rayon. Alternately, the rayon portion may be dyed so as to reserve the Arnel component. Should reactant type dyes be used for dyeing rayon, a two-bath system is necessary.

The dyeing of Arnel/cotton blends is similar to that for dyeing Arnel/rayon blends. One essential difference is that the cotton must be thoroughly bleached in order to remove motes. A typical winch bleaching formula is shown as follows:

5 gms/liter of 50% hydrogen peroxide
3 gms/liter sodium metasilicate
0.25 gms/liter of wetting agent-raise to 176°F. in ½ hr.
Run at 176°F. for 1 hour. Rinse in warm water

It is important that the temperature of the bleach bath not be over 176°F. and pH maintained at not over 10.5, in order to prevent saponification of Arnel. Cotton in blends with Arnel may also be dyed using reactant cellulosic dyes applied by a continuous pad-thermofix process or by a separate pad-jig process. For cotton dyehouse processing, a continuous procedure has been developed to dye Arnel in blends with cotton, using a continuous pad steam process in which dispersed acetate color is padded on the fabric from a solution of dye in 10-20% triethyl phosphate. The fabric is subsequently steamed and washed in continuous units. The cotton portion may be dyed by conventional pad steam dyeing using selected vat colors to achieve either cross, reserve or union shades.

The dyeing of Arnel/Dacron/cotton blends is similar to that of dyeing Arnel/cotton. A union shade is dyed on the Arnel/Dacron portion with either cross, reserve or union shades dyed on the cotton portion. As in the preparation of dyeing Arnel/cotton, it is equally important to effect mote removal from the cotton by bleaching. Dyeing of Arnel/Dacron to a union shade involves critical selection of dyestuffs having a balanced distribution between Arnel and Dacron, and employing a non-volatile accelerant such as Latyl Carrier A. Dyes which have been found to give a

(Continued on Page 38)

Geigy

200 years Geigy

A money-saver

Here's a Geigy dyestuff that presents genuine economy. Not only does Diphenyl Fast Navy Blue ARL make possible a low-cost navy blue on cotton and viscose rayon, but its fastness to light and washing is superior to the so-called inexpensive navies. Interestingly, the light fastness on spun rayon is actually improved by crease proof finishing.

Rich, bloomy shades of navy can be secured with 3% on cotton, viscose and spun rayon. In addition, Diphenyl Fast Navy Blue ARL has excellent dischargeability, good acetate reserve and is level dyeing. Bulletin 79-G is available with details.

GEIGY DYESTUFFS—Division of Geigy Chemical Corporation, Saw Mill River Road, Ardsley, New York. Branches in all textile-producing centers. Dyestuff makers since 1859.

Diphenyl* fast navy blue ARL

**A Geigy trademark*

Arnel Staple

(Continued from Page 36)

TABLE IV

Suggested Dyes for Arnel

BLUES
Eastman Blue BGLF
Eastman Blue GLF
Nacelan Fast Blue KDK
Cibacete Blue GLF Conc.
Lenra Blue RLS
Interchem Triacetate Blue GSF
Nova Acetate Blue GSA
Latyl Blue FL
Celliton Fast Blue LAFR
Nacelan Blue KLF
Latyl Brilliant Blue BG

REDS
Eastone Red NGLF
Nacelan Red 2G
Artisil Scarlet GFL Ultradispersed
Cibacete Red NGGF
Celliton Fast Red GNLF
Latyl Scarlet FS
Interchem Triacetate Red GSF
Nacelan Red LHK
Cibacete Red GFB
Nova Acetate Red GSA
Interchem Triacetate Scarlet GSF
Nacelan Scarlet LRH
Celliton Fast Red B
Cibacete Scarlet GBR
Nova Acetate Scarlet GSA
Eastone Fast Red 2BGLF
Eastone Fast Pink 3BGLF
Celliton Fast Pink 3BWF
Cibacete Red GGF

VIOLETS
Celliton Fast Red Violet DAC
Celathrene Violet BGF
Eastman Violet 3RGLF
Resoline Blue RRL

YELLOWS
Lenra Yellow CW
Interchem Triacetate Yellow HDLF-40
Nacelan Yellow KAL

union dyeing appearance on 65/35 Arnel/Dacron blends are Eastman Blue BGLF, Artisil Orange GFL and Polyester Dark Red FL. Others may also be satisfactory. Dyeing temperatures should be as close to the boil as possible.

Heat Treat and Resin Finish

Chemical finishing of either Arnel/rayon, Arnel/cotton or Arnel/Dacron/cotton blends is necessary to achieve the best wash and wear performance and proper fabric hand. Heat treat the Arnel/rayon or Arnel/cotton fabrics at approximately 415°F. fabric temperature. Arnel/Dacron blends should be heat treated at 380-390°F. Either a 2-roll Morrison unit, a 2-can National Dryer unit or selected hot air pin frame units are satisfactory. After heat treatment, it is advisable to singe the Arnel/Dacron blends. Resin finishes, after heat treatment, should be applied to the cellulosic blends to obtain the best wash and wear performance and required hand characteristics. Choice of resin will depend on fastness and type of dyeing on either the rayon or cotton portion and ultimate colorfastness required. It is important that the quantity of cross linking resin finish applied to the cellulosic fibers be kept within limits that will not inhibit subsequent pleating and creasing of the fabric.

TABLE V

Finishing Formulation for
55/45 Arnel/H.T. Rayon Challis

Resin finish after heat treatment.

1. Pad with 75% wet pick up
   170 g/l Permafresh LCR-2
   20 g/l Catalyst W
   10 g/l Protolube PE
2. Dry at 250°F.
3. Loop cure 300°F. for 4½ min.
4. Wash on winch
5. Pin frame dry with overfeed to 46½"

TABLE VI

Finishing Formulation for
50/30/20 Arnel/Dacron/Cotton Cord

Resin finish after heat treatment.

1. Pad with 60% wet pick up
   90 g/l Aerotex Cream 450
   15 g/l Catalyst H-7
   7 g/l Elvanol 51-05
   18 g/l Decetex 104
   3 g/l Catalyst XEY-21
2. Frame dry
3. Loop cure 320°F.—4½ min.
4. Winch wash
5. Tenter dry
6. Silk calander

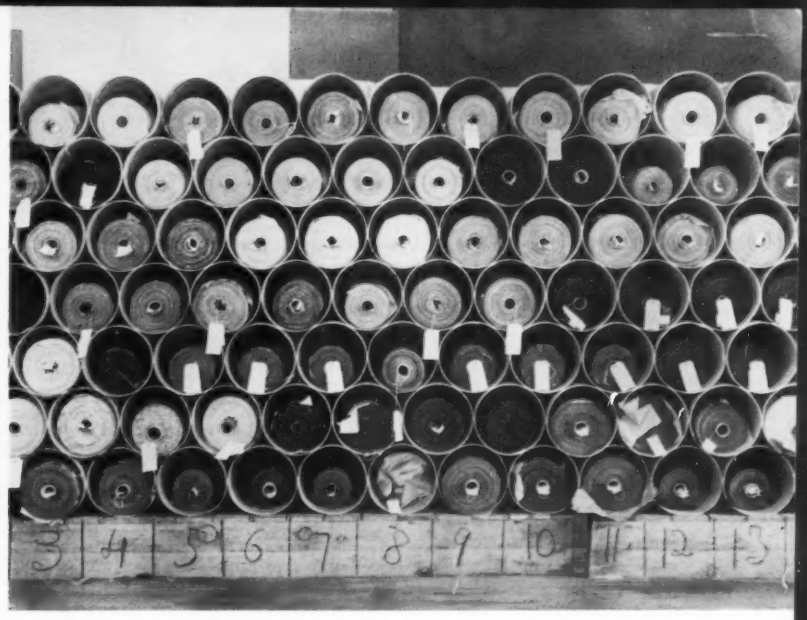
TABLE VII

Finishing Formulation for
55/45 Arnel/Cotton Flannel

Resin finish after heat treatment.

1. Pad with 75% wet pickup.
   90 g/l Aerotex Cream 450
   20 g/l Catalyst MX
   20 g/l Protolube PE
2. Tenter dry
3. Loop cure 320°F. for 4½ min.
4. Winch wash. Frame dry

Recipes containing urea formaldehydes, hydroxyethyl cellulose, starch ethers, silicones, polyvinyl alcohols and polyethylene emulsions are among some which have been commonly used. A final winch washing is recommended after resin finishing. Examples of typical finishing formulas for the three fabrics previously discussed are given in Tables V, VI and VII. ■



CIRCULAR BINS—Raised wooden platform in storage room of Auerbach & Co. keeps floor dust from entering tubes and doubles as numbering panel for inventorying pieces.

fiber tubes provide low cost fabric storage

Los Angeles converter finds they aid inventory keeping

By George J. Bevans
INDUSTRIAL ENGINEER

A NEW STORAGE SYSTEM has been devised for bolts of fabric which permits fabrics to be stored conveniently, and with minimum handling. Low in cost, the system can be easily and quickly installed. It makes maximum use of a storage area, and saves time and labor costs, because it requires less handling and makes inventorying a simple operation.

The economical fiber tubes that are the heart of the system provide fire protection, prevent damage or injury, and keep the rolls of fabric clean. Even with many hundreds of rolls of merchandise to store or display, every one is immediately accessible for removal or inspection, and every tube is readily available for storage use.

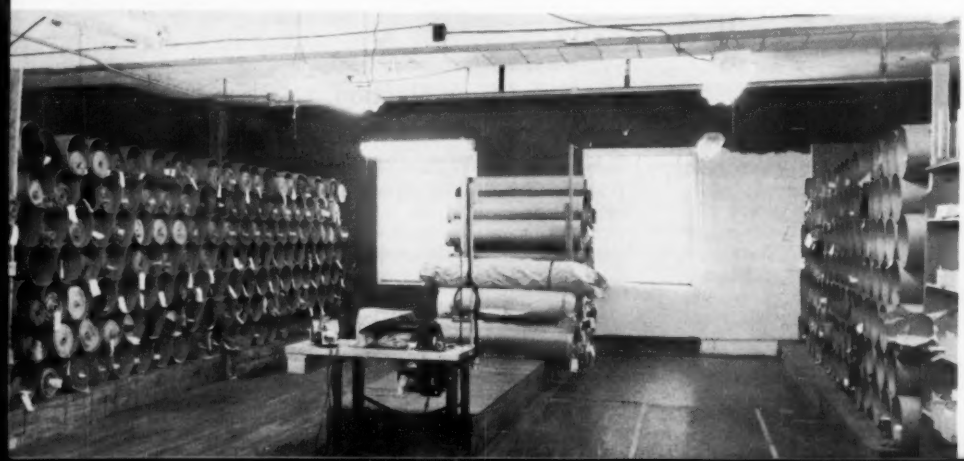
Basically, the system consists of a number of fiber storage tubes placed in rows, from the ground up, as high as local fire codes allow. It is unnecessary to move a single bolt of fabric other than the one desired, and this slides easily from the tube. Merchandise at the bottom of the pile is as easy to get as that at the top, because all other tubes hold their position.

The Los Angeles textile converting firm of Auerbach and Co. recently installed a fiber storage tube system in their plant. They have no problems about locating any piece of fabric, nor about inventory. They chose an area where they could put two storage sections of tubes facing one another, with an island in the center which includes a small storage area and work table.

A major benefit of the system is the simplicity it affords in keeping inventory. Numbers are assigned to the rows and the tubes. A tag is placed at the outside end of each bolt of cloth, giving full details on fabric, style, color, size, yardage, dye-lot, etc.

An index card in the office, showing each location, completes the inventory control. A warehouse storage area's contents can quickly be ascertained from the card file. If goods are to be shipped for an order, a customer is not left in doubt about availability or delivery.

Because the tubes can be stacked high, maximum use is made of the storage area. By using a platform beneath the first row of tubes, floor dust and dirt



ROOM FOR MORE—Two rows of fiber cylinders provide storage space for more than 300 cuts of fabric.

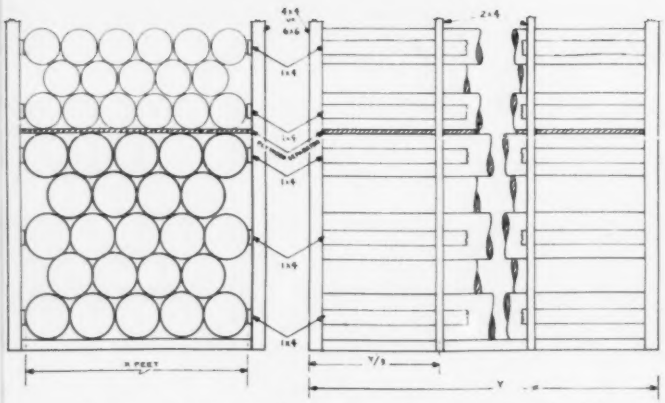


Diagram showing how fiber tubes are set up to serve for fabric storage bins.

can be prevented from soiling the goods. Since no roll is in direct contact with another, pressure marks are eliminated. The tubes are also fire-resistant, adding a bonus protection, and their sturdiness prevents accidental damage to a fabric.

How To Install A System

The first step in laying out a system is to determine the amount of space available for storage. Next, decide which size tubes you require—they come in sizes from 8″ to 36″ diameter. The size you need is naturally determined by the diameters of the pieces of fabric you manufacture. The tube length is several inches longer than the fabric width.

Naturally, the number of tubes in a given installation is determined by the size of the tubes and the amount of space available. For example, for an area only 25 feet wide and eight feet high, with 12″ fiber tubes, you can store about 188 pieces of cloth.

If the desired storage area will not be using existing walls, retaining walls or frames should be built.

The accompanying diagram shows the details of construction. Upright framing should be 3′ on center. If a solid wall is desired, plywood or other sheeting material can be nailed to the uprights. 1 x 4′s nailed horizontally to the framing, and running the entire length of the tubes, can be used. The outside tubes, those at the ends of rows 1, 3, 5, etc., must be flush with the 1 x 4′s to prevent the uprights from cutting tubes.

It's not a good idea to mix various diameter tubes, because it wastes space and also may cause damage to the tubes. When different sizes are needed, place a sheet of plywood across the top row of the larger tubes, and then begin a new row with the smaller size tubes. The bottom of the highest tube should not exceed the height at which a man can handle a roll safely.

This system has proven its value in storage facilities throughout the country. It provides the best storage with the least handling problems, and the simplest inventory control—all at a low initial cost, and all with continued savings from the first day of installation.

Warning on nylon waste in rugs

Carpet manufacturers, distributors and retailers were alerted last month against the dangers of nylon waste in floor coverings. The warning was made by Industrial Rayon Corp., a producer of carpet nylon, in a series of advertisements in trade publications. Under the large-type heading, "the word NYLON isn't enough" the text of the advertisement said:

"As a producer of nylon we have a responsibility to warn all manufacturers, distributors and retailers of carpets against the hidden danger that the word nylon is also used for waste materials that are sold as fiber stock, garnetts or the like.

"The word nylon itself does not offer the protection expected because such nylon waste is also called nylon fiber. Neither is the word "virgin" a safeguard because the word "virgin" may be technically applied to nylon that has not previously been used in carpets.

"Nylon is produced in many forms for many end-uses—from the fine deniers for delicate apparel to the heavier deniers specifically designed for carpet use. There is no reason to believe that nylon specifically produced for heavy industrial uses or women's hosiery can perform satisfactorily in carpeting as the carpet nylon especially engineered for such a demanding end use.

"There is a special danger in the fact that these waste by-products have been incorporated in carpets at all price classes—not only the cheap items where price alone indicates the use of waste.

"It is not right . . . in theory . . . in practice . . . or by experience.

"All waste-containing carpets hold the danger of latent, built-in deficiencies and defects—deficiencies that may be not be apparent at the point of sale. These deficiencies could very easily develop into serious complaints resulting in costly claims.

"Your protection lies in demanding that the carpet you sell be free from nylon waste material, whether called garnett, fiber-stock or any other name.

"Remember the word "nylon" is not enough."

Tire Yarn Prices Cut

Price reductions for nylon tire and heavier denier industrial yarns, effective May 20, 1958, have been posted by Du Pont Co. and Chemstrand Corp. All other nylon yarn prices were unchanged.

Both the 840 and 1680 denier tire yarns were reduced 10 cents a pound, to $1.20 a pound, with the 2520 denier cut 9 cents to $1.18 a pound. The 4200 and 5040 denier yarns both are now $1.17 a pound, off 8 cents, and the 7560 and 10080 denier yarns are $1.16, also down 8 cents. The 15120 denier yarn, now also $1.16 a pound, was reduced 7 cents.

Vat Dye Group Election

H. J. Daigneault, of National Aniline Division, Allied Chemical Corp., has been elected president of The Vat Dye Institute, Inc. Also elected were: J. C. Walker, Toms River-Cincinnati Chemical Corp., senior vice president; T. C. Keeling, Koppers Co., Inc., vice president, J. R. Bonner, General Dyestuff Co., treasurer; H. F. Herrmann, executive secretary, and E. S. Meyers, Laporte & Meyers, counsel. The Institute, composed of U.S. vat dye manufacturers, maintains headquarters in the Empire State Bldg., 350 5th Ave., New York 1, N. Y.

Ronald R. Boyd

Robert M. Cushman

Raymond J. Austin

Amerotron's Luke

(Continued from Page 30)

Under Ed Luke's astutely marketwise guidance the outlook is good for continued prosperity for Amerotron. The dust, the turmoil and the upheavals of many mergers have settled; the fluctuating course of the old Textron textile operation in and out of finished goods and garments (remember the slogan—"from yarn to you") has finally been straightened out into a basic, classical weaving business turning out synthetic gray goods for sale to converters. The dizzy turnover of high-powered and high-priced vice presidents has come to end along with the turnover in mill properties.

In contrast to the Textron of a few years ago, an air of stability, of ordered calm and well-planned activity pervades its successor, Amerotron. Ed Luke believes in a carefully planned manufacturing operation, and in close coordination between manufacturing and sales. Under his system of management, Amerotron is not a one-man operation, he is the first to point out.

He depends heavily on his staff of sales and manufacturing executives, using as the basis of his administration what he calls his "cabinet" of three hard-working, able executives. These are Ronald R. Boyd, executive vice president in charge of planning, coordination and administration with headquarters in New York; Robert M. Cushman, executive vice president for manufacturing, with his office in Aberdeen, N. C., and Raymond J. Austin, treasurer.

There are, of course, many other men with Amerotron. They are happy in their jobs, and they have the manner of men who are expecting to stay where they are for a long time. This is the way Ed Luke wants it, and this is the condition he has labored hard to bring about.

In speaking and thinking about the future, Ed Luke is a convincing optimist. Basically, he feels that, in the past ten years or so, the weaving industry has gone through an agonizing period of modernization marked by disturbing mergers, liquidations and overall shrinkage in the number of producers. These changes, painful as they were, have laid the basis, he believes, for a coming period of health for textiles if millmen are smart enough to remember the lessons of the past and keep gray goods production in line with demand. In this way, mill operations can earn the reasonable profit to which they are fairly entitled; and Ed Luke is proud of the fact that, under his leadership, Amerotron with its 120 hour work week has been the pace-setter in showing the industry how to keep output in harmony with demand, thus opening a bright new road toward a more profitable textile industry.

Nylon Waste Disposal

E. D. Remy, quality control supervisor, and D. T. Lauria, sanitary engineer at Chemstrand Corp.'s nylon plant at Pensacola, Fla., revealed in a joint paper they presented at the recent Purdue University conference, that Chemstrand is using a new and different system to dispose of nylon process waste. A new disposal program was required, it was stated, because the original waste control scheme initiated in 1953 became ineffective due to plant expansion. Chemstrand began nylon production that year with an annual capacity of 50 million pounds; present capacity is rated at 114 million pounds. The resulting liquid waste from the new process is reported to be harmless when discharged in the Escambia River at the plant site.

Nylon Tire Cord Use Growing

Nylon use in the tire cord market will be greater in 1958 than in 1957, according to Philip M. Walters, manager of Du Pont's Textile Fibers Department tire cord merchandising. Walters said nylon's share of the cord market in 1957 was about 33% or about 87 million pounds. In 1958 he said that 12 of the 18 automobile manufacturers approved nylon tires as optional equipment for this year's models.

J. L. Hayman, of the Textile Fibers Department industrial merchandising section, said that the nylon cord advertising for this year is the largest yet and includes campaigns in five major categories—the tire dealer, the automobile manufacturer, the new car dealer, the truck and fleet operators, and the general public.

By SPECIAL CORRESPONDENT

Europe's textile men search for new markets

VIENNA—Leaders from two of the world's oldest textile fiber industries—silk and wool—met here recently and departed with high hopes for the future. Japanese delegates at the permanent executive committee meeting of the International Silk Association let it be known that they are formulating a scheme to raise money to aid in the promotion of silk fabrics, woven and knitted. Details of the plan are not completed. But it is expected that the funds would be earmarked for silk manufacturers throughout the world. Perhaps as part of this plan, Japan also revealed that it was ready to place export curbs on shipments to countries whose own silk industries are having trouble competing with imports from Japan. Uniform silk labeling is also being worked out.

Woolmen See Brighter Future

The International Wool Textile Organization's annual meeting brought forth the belief that the second half of the year would show a marked upturn in consumption. High inventories caused by excessive buying set off by the 1956-57 Suez Canal crisis have just about disappeared. Raw wool prices were felt to be at reasonably low levels. U. S. wool activity has remained good despite the American business recession, and demand in Canada has actually staged a marked increase.

French and British Disagree

Everything wasn't pretzels and beer at the Vienna wool meeting, however. French wool men expressed dissatisfaction with British Commonwealth preference. They said they would have to compete with British woolens in the upcoming free trade Common Market but would be at a disadvantage in trying to export to members of the Commonwealth. . . .And on another matter—Uruguayan wool top subsidies—IWTO itself unanimously condemned this and all other forms of export subsidy.

Bullish Outlook for Sheep

A. R. Baines, IWTO president, after urging that manufacturers "have policies designed to bring about an expansion of international trade," declared that "there has been a distinct upward trend in international wool textiles." But he warned "against the danger of inferring from the temporary difficulties of our industry that there is any fundamental decline in the demand for wool clothing."

UK Rayon Output Dips

Britain's rayon filament and staple production in the first quarter of the year staged a sharp decline due, it is felt, to tightened credit and generally slack business in soft goods. Demand rose for industrial rayon especially for tire cord, however. Viscose tufted carpet use was also satisfactory. The quarterly decline was 12% from the same period of 1957—the Suez crisis peak.

Newer Man-Mades Do Better

UK output of true man-made fibers, however, continued in the first quarter at capacity levels. For nylon and Terylene polyester fiber this means some 60 million pounds annually. The British Rayon Research Association is accelerating its activity in the field of high polymer solutions and fibers. A new light effect has been worked out which should permit improvement in analyzing molecular structure. When this has been worked down to the fiber, greater tensile strength and elasticity may be in order.

UK Cotton Troubles

On Britain's cotton textile front, two old problems remain unsolved. First, the Cotton Board disclosed that talks with India and Pakistan failed to bring agreement on a duty-free import level after which restrictions would have been authorized. And, second, the Amalgamated Weavers' Association, Britain's largest cotton textile union, fearing further mill closures, has demanded six month's notice on further shutdown and just compensation for displaced workers.

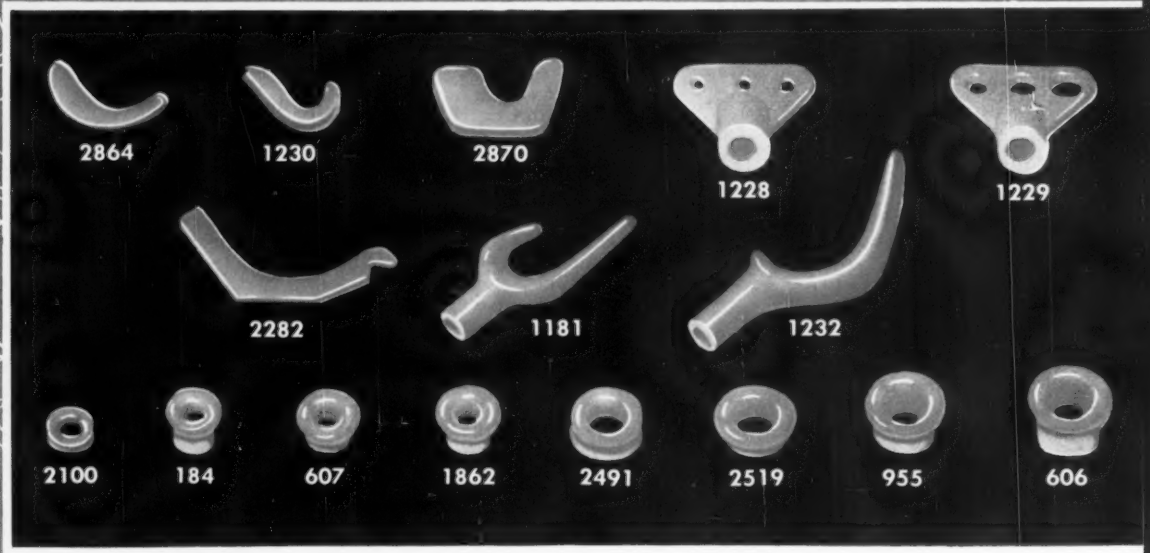
French Rayon Merger

Two big French rayon spinners—Compagnie Industrielle des Textiles Artificiels et Synthetiques and Societe Lyonnaise des Textiles—have agreed to link their production and administration facilities in another move to meet future competition stemming from the Common Market.

World-Wide Synthetics Promotion Asked

The annual convention of the International Users Association of Man-Made Fibers, which met at the seaside resort of Knokke-le-Zoote, Belgium, stressed the need for a world-wide promotional effort to parallel that underway for the natural fibers. They don't want to see a destructive inter-industry fracas. Rather they would have promotional material complement that being done in the other textile fields.

MACHINERY and EQUIPMENT SECTION



Mitchell-Bissell "BLUE SATIN FINISH" Porcelain Guides

For Circular Knitting Machines and Stop Motions

"BLUE SATIN FINISH"*, the original satin finish for Porcelain Guides, was perfected and introduced by us to the Textile Industry in 1936, with the blue color adopted only as a means of product identification. This finish provided . . . and still provides . . . a surface having *far greater resistance to thread wear* than available in any other porcelain guide.

"BLUE SATIN FINISH"* Porcelain Guides were used on the *first run* of Nylon Yarn, and have since been considered standard equipment by leading processors of Nylon, Dacron, Orlon, Rayon and all the other synthetic fibres.

Because there are other "blue" guides on the market, it is only by specifying the complete name . . . MITCHELL-BISSELL "BLUE SATIN FINISH"* PORCELAIN GUIDES . . . that you can be sure of getting the *genuine, wear resistant finish* that makes these guides so far superior in service and economy.

MITCHELL-BISSELL "BLUE SATIN FINISH"* PORCELAIN GUIDES are available in thousands of standard shapes, or made to your specifications. Guides illustrated above are shown in approximately actual size.

*Reg. U.S. Pat. Office.

Southern Representative:
R. E. L. HOLT, JR. & ASSOCIATES,
GREENSBORO, N. C.

MITCHELL-BISSELL CO.

MAIN OFFICE AND FACTORY:
TRENTON, N. J.

New MACHINERY
New EQUIPMENT

Yarn Conditioner

Mona Industries, Inc., has announced it has been awarded U. S. patent 2,828,715 for the Monarc yarn conditioning device for Abbott automatic quillers. Mona reports the attachment, in addition to its yarn conditioning, can be used for the application of anti-static solution. The device also is said to lend itself to the identification of different yarns. *For further information write the editors.*

Tire Cord Yarn Inspector

An automatic inspector for checking tire cord yarn in the warping operation for strip-backs, fluff balls and broken filaments at high speeds has been produced by Lindly & Co., Inc. By causing the warper to stop upon the occurrence of a defect, the yarn can be repaired with a resulting increase in quality and reduction of difficulties in subsequent operations. Lindly reports the instrument is applicable to any type of denier of tire cord yarn. *For further information write the editors.*

Raschel Hi-Speed Knitters

The newly-established Barfuss Corp. of America will handle sales in this country of high-speed Raschel knitting machines. The Barfuss parent concern, Wilhelm Barfuss Gmbh, of Wilhelmshaven, Germany, reported to be the world's oldest producer of Raschel machinery, expects to begin making shipments to the U. S. shortly. Showrooms also will be established in New Jersey, close to the New Jersey and Pennsylvania textile centers. The Raschel machine, introduced in Germany by Barfuss in 1855, was the first mechanical knitter which could manufacture a wide variety of fabric items, ranging from laces and tulle to curtain materials and elastics. *For further information write the editors.*

Paris Sweater Finisher

Paris Manufacturing Co. has announced it has placed in quantity production its new automatic sweater finisher for precision pressing all sizes of sweaters, from infants' to adults'. The prototype of this production model was developed with the cooperation of

Huntingdon Mills, which recently installed four of the new finishers. Paris reports the finisher's design and construction permits all of the machine's components to be made to correspond exactly with each manufacturers' patterns and measurements. With built-in specifications the machine automatically presses all sweaters uniformly. *For further information write the editors.*

Textile Spool Bores

The Akron Spool & Manufacturing Co. has announced a new method of finishing the bearing surfaces in the bores of textile spools. The new process is said to permit finishes and tolerance on spindle tube bores heretofore considered entirely impractical because of cost. *For further information write the editors.*

New Saco-Lowell Rings

Saco-Lowell Shops recently introduced two completely new spinning rings which, the company reports, have many advantages. The first of these, Saco-Lowell's "Speed-Tex" ring, is said to offer the shortest breaking in period of any known ring while retaining the properties of highly smooth finish, close tolerances and long life.

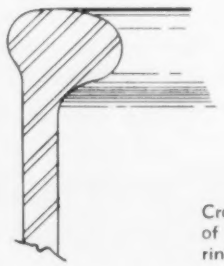
The short breaking in period is the result of a new surface metallic alloy, the company reports. The alloy *is not intended to remain unchanged.* The traveler gradually alters the finish. Invisible after a short time, traces of the alloy in the traveler path aid in providing longer traveler life.

On the new "Speed-Tex" ring, the final finish is obtained at low temperatures which do not soften the initial case hardness of the basic steel ring. A softer ring, Saco-Lowell points out, would break in satisfactorily, but would have a short life. Actual mill tests show only five or six traveler changes are required for complete breaking in compared to 50 to 100 traveler changes for conventional rings.

A Second New Ring

For some types of installations, the flange contours of the new ring have been redesigned, and this ring is known as the Saco-Lowell "Model O1C Speed-Tex". With this ring, the company reports, a new high is reached in large package spinning speeds. Special flange contours permit traveler speeds never before obtained, the company states. The inner flange bearing surface of the traveler is full width to provide a wide, steady traveler path. The outer flange, not a true bearing surface, has been sharply reduced in width.

A wider traveler may be used without changing its total weight. A special wider traveler, developed by the Victor Ring Traveler Division of Saco-Lowell, is also elliptical with a small circle resulting in a low center of gravity. The combination of low center of gravity and increased width result in better traveler balance, more stable operation, and superior running conditions. More bearing area and uniform pressure reduces traveler wear.



Cross-section of spinning ring Model O1C.

Saco-Lowell states that the Model O1C has all the short break in advantages of other Speed Tex rings. Both new rings are products of Saco-Lowell's Pawtucket Ring Division. *For further information write the editors.*

Loopless Toe Licenses Available

Manufacturers of women's circular knit hosiery may now obtain licenses to make stockings with gusset panel loopless toes under the separate patents obtained by James L. Getaz and Bear Brand Hosiery Co. The Getaz gusset panel loopless toe was successfully developed and put into production by Adams-Millis Corp., High Point, N. C., and Scott & Williams, Laconia, N. H.

Meanwhile, Bear Brand Hosiery Co. had been working along lines somewhat similar to Getaz and succeeded independently in producing and is now selling to the trade hosiery having another form of loopless toe construction.

On March 4, 1958, Patent #2,825,215 was issued to Bear Brand covering its new stocking and the method of its production. Like Getaz, Bear Brand also has other patent applications pending. As in Getaz's construction, the Bear Brand stocking has a slender foot, with or without toe reinforcement and with or without heel reinforcement.

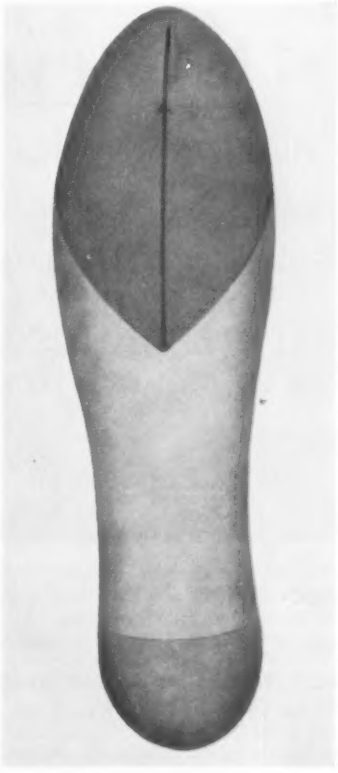
Both the Getaz and Bear Brand stockings are distinctive in that they are closed by a short seam running lengthwise under the foot. This seam is so located that it is subject to a minimum of strain when placed on the foot, and it cannot be felt by the wearer. The seam is completely invisible when worn and cannot be detected even when worn with open toe sandals.

It has been agreed that, in the best interests of the hosiery industry, the patent rights of both Bear Brand and Getaz should be offered on a non-discriminatory basis to the entire industry in a single form of license agreement and at a single low rate of royalty of 6¢ per dozen pair.

Accordingly, patent rights of both Getaz and Bear Brand relating to their loopless toe stocking developments have been assigned to the United States Trust Co. which is authorized to issue such licenses to the entire industry. All loopless toe stockings made under this license, for simplicity, will be called "Getaz Toe" stockings.

Scott & Williams is giving technical assistance to licensees under these inventions, and will supply parts and service machines used in manufacturing stockings under the licenses. Scott & Williams also is making available technical information as to modifications needed to be made on its machinery in order to knit the Getaz stocking and its modifications.

Adams-Millis, whose plant at High Point is conveniently located with respect to the industry, is available to give to any licensee full operating know-how in the manufacture of ladies' seamless nylons employing the Getaz gusset panel loopless toe and modifications thereof. Both Adams-Millis and Bear Brand, as the original licensees, will manufacture and sell Getaz stockings under licenses and terms identical to those offered the rest of the industry.



Getaz loopless toe stocking showing seam on bottom of foot.

Requests for licensing arrangements or for further information about this development should be sent to Scott & Williams, Laconia, N. H. or to the editors.

Allied Chemical in Canada

Allied Chemical Canada, Ltd., a new Dominion corporation with main offices in Montreal, on June 2 became the successor of five long-established Canadian companies: The Barrett Co., Ltd.; Brunner Mond, Canada, Ltd.; National Aniline & Chemical Co., Ltd.; The Nichols Chemical Co., Ltd., and Semet-Solvay Co., Ltd. Officers of Allied Chemical Canada are R. W. Atkinson, president; E. P. Aikman, executive vice president, and Gordon B. Schroeder, vice president. The new corporation is a subsidiary of Allied Chemical Corp. of New York, N. Y.

Allied Chemical Canada's product lines include sulphuric acid, hydrofluoric and other industrial acids, aluminum sulphate, soda ash, fine chemicals and reagents, roofing, felts, insulating board, dyes, tars, oils and many other products.

Allied Chemical Corp. has opened a combined sales office laboratory and warehouse in Atlanta, Ga., to meet the growing needs of surrounding Southern states. Allied also reports that it has appointed Eaton Chemical and Dyestuff Co., Detroit, Mich., as agent for its Semet-Solvay Petrochemical Division, to market A-C polyethylene 6 and 629 in Michigan. This polymer is used in textile finishing, polishes, inks, and in molding operations.

Form Converting Firm

Formation of a new converting firm, Cook and Jason, Inc., has been announced by Harold A. Jason, president of Harold A. Jason, Inc., shirting converter, and Joseph W. Cook, formerly merchandise manager of menswear for Riegel Textile Corp. The firm will engage in converting a full line of synthetic and cotton fabrics styled for the men's, boys', juvenile slacks, suit and outerwear trades. The new firm will have offices at 10 W. 33 St., in New York City.

NEW FABRICS

NEW YARNS

New Mylar Yarn on Market

Metlon Corp. reports its recently-introduced clear Mylar yarn, known as Crystal Mist, is finding quick acceptance from both weavers and knitters. The yarn, equally applicable in fashion and home furnishings fabrics, does away with the need for a large color inventory, since its characteristic is to pick up the color of the fiber with which it is used. Resist dye effects also are possible in piece dyeing, according to Metlon. *For further information write the editors.*

Wayne's Rayon Fabrics

Wayne Weavers, Inc., is producing a new custom collection of upholstery and casement fabrics designed by Robert Reed. Avisco rayon fibers are used in 85% of all the fabrics. Fibers of rayon and cotton in combination are said to achieve a wool look, or a linen look by a nubbed or slubbed effect. Wayne sells the fabrics to jobbers on an exclusive basis. The fabrics are priced to retail at around $6 to $15 a yard. *For further information write the editors.*

New Nylon Hosiery Yarns

Commercial availability of six new nylon hosiery yarns has been announced by Du Pont. The new yarns, the company said, will bring new styling and greater variety to women's hosiery. Prices of the new yarns, per pound, are as follows: 17 denier, 2 filament, $7.05; 21 denier, 3 filament, $5.48; 28 denier, 4 filament, $2.81; 14 denier, 2 filament, $7.90; 20 denier, 2 filament, $5.55, and 15 denier, 3 filament, $6.10. Another yarn, the 20 denier, 1 filament nylon, is now priced at $4.95; it had been $4.42.

Nylon Starter Rope

Columbian Rope Co. is now offering a new nylon starter rope for quick starting of small motors, such as outboards, lawn mowers, power saws, pumps, etc. Made from filament nylon, the starter rope is 42-inches long, with a round hardwood handle attached. *For further information write the editors.*

(Continued on Page 74)

TDI News

Winners in Golf Tournament

At the TDI Golf Tournament, Shawnee-on-Delaware, in June C. Lowery Stafford, Jr., of Burlington Tricot Fabrics Co., won the Herman Chopak Memorial Trophy for members low gross score. Mr. Stafford, with a score of 77, winning for the third time, was awarded permanent custody of the cup.

Max Shustek, Penn Rayon Corp., won the Julius Chopak Memorial Trophy for low members' net score with an 88-12-71. W. D. Clark of Celanese Corp. was low gross winner at the tournament with a score of 73. In all, 45 prizes were awarded to members and guests as a result of participation in the tournament. The three day tournament was attended by more than 330 members and guests.

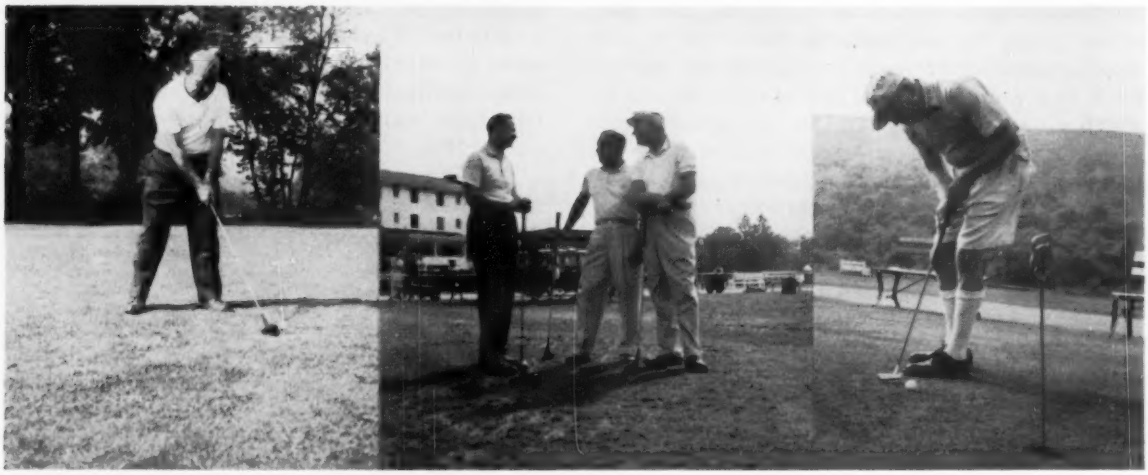
New Member Enrolled

New England Textile Co., Inc., has been enrolled as a member of the Textile Distributors Institute. The firm with offices at 379 Broadway, New York 13, N. Y., is a distributor of men's wear, plain spun, plied yarn and special fabrics. It also does an export business. Jack Litwack is president.

THE TEXTILE DISTRIBUTORS INSTITUTE, INC.

NEWS AND COMMENT

At Shawnee — all play and no work



Golf, relaxation and a chance to let off steam in a musical show satirizing the converting business were the order of play at the Textile Distributors Institute's annual golf tournament last month at Shawnee Inn, Shawnee-on-Delaware, Pa. Some of the golfers are shown above.

TWO WAYS TO RELAX—Some at the tournament relaxed on the veranda. Others relaxed with the new game of motorized golf.

THE SHOW MUST GO ON!—Below, some of the scenes from this year's TDI musical, "Have Creditors—Must Travel".

REPORT FROM JAPAN

By B. Mori

Changes in silk support program; cotton exports falling; wool cloth shipments to U. S. at record high in 1st quarter

OSAKA—The Government has announced drastic changes in its system of stabilizing raw silk prices. Under the new methods, there will be less direct support of prices in routine market operations. In a word, instead of providing a lifeboat in which all silk growers can ride the government plans to let them splash around on their own in the whirlpools of the market, throwing out a life preserver only when some particular swimmer seems in danger of going down.

Self-Reliance Encouraged

According to trade reports (no official summary of the new system has been released so far) the new price support methods will work this way: Beginning early in June, the Government discontinued direct purchases of silk on the open market from anyone who wanted to sell at the support price. In the future all price support purchasing will be done by the Japanese Raw Silk Export Storage Corp. which buys only from reelers. Purchases are limited to 2,000 bales monthly which is allocated among reelers. Another part of the program calls for an extension of the cutback in production by reelers but the cutback will be reduced to 10% instead of the 20% that was in force heretofore.

Rayon Staple Output Drops

Production of viscose staple has continued to come down fram the all-time high, in line with the industry's price-supporting production curtailment program. In the first quarter, production was 149 million pounds compared with the record high of 193 million pounds set in the first quarter of 1957.

The curtailment program for staple, filament yarn, spun yarns and fabrics is continuing through this quarter unabated. The industry hopes that these strong measures will cure the over-supply situation by autumn, and that more normal conditions of production and marketing will prevail thereafter.

Meanwhile, production of textile filament rayon yarn dropped sharply in the first quarter, to 30 million pounds, from 51 million pounds in the first quarter of 1957.

On the lower side, also, were: acetate staple and cuprammonium yarn; while vinylon yarn, saran and viscose high-tenacity yarn production almost broke even. Acetate yarn was higher, while a large gain in nylon staple more than offset, statistically, a reduction in nylon yarn output. Acrylic fibers, in small production, continued to gain, while PVC fibers declined sharply. Production of woven rayon fabrics was down 10% while synthetic fabrics gained 50%.

The export picture was much brighter, with shipments of staple almost doubled, filament yarns up over 20%, spun yarns up over 10% and fabrics up almost 20% over the first quarter of 1957.

Cotton Exports Outlook Dims

Cotton cloth production is running between 15 and 20% below early 1957. Although exports have held up well so far this year, bookings for future shipment have declined sharply. The trade now fears that exports will be substantially below 1957 for the full year.

Exports of woven cotton fabric apparel products to the United States have been active so far this year, indicating that quotas will probably be filled easily. Some cotton knit items are selling well, but others are down sharply, indicating that the quota here may be difficult to fill. Other than cotton, knitwear sales are far below 1957 figures.

Wool Cloth Exports to U. S. Rise

The wool textile business presents a picture of contrasts. Exports of fabrics to the U. S. in the first quarter were the largest on record, double the same period of 1957, as everyone rushed to enter goods before the tariff raising point in the U. S. was reached. Exports to other countries, however, were far below 1957 figures; so if shipments to the U. S. drop sharply later in the year, hardship will be felt here.

Wool yarn production continues to be cut back sharply, while worsted fabric output has been kept up in the first quarter to meet export requirements, and actually was at a new post-war high.

Production and exports of silk fabrics, including exports to the U. S., have been holding just about even. The trend in the second half (when shipments rose sharply in 1957) will be more significant, especially as American buyers are placing commitments much more cautiously. . . .The raw silk industry is beset with problems of higher production of cocoons at a time when domestic and export demand for raw silk have declined.

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AATT

A realistic concept of wash-and-wear

By George S. Wham

IN 1957 TWO BILLION YARDS of wash and wear treated cotton cloth were produced; $350 million dollars were spent for wash and wear men's wear in the same year. The volume this year will run even higher. This in spite of the fact that it is too often an abused, deceptive and fraudulent concept. The thousands of women throughout the country that write to us at "Good Housekeeping" each year don't believe a lot of the exaggerated claims for either synthetics or for cotton wash and wear. Yet with all its failures and misrepresentations consumers love these garments.

A recent "Good Housekeeping" survey reveals that though most consumers stated that items bought as wash and wear needed some ironing, only 8.2% indicated dissatisfaction with their purchase. A larger percentage of synthetic and synthetic blend garments than cotton garments were rated as needing no ironing. To clear up confusion and create consumer confidence in wash and wear, Good Housekeeping Institute proposed its concept of wash and wear last January.

We established our concept or standards as a defense for our readers against the pilfering, the cutthroat methods, to which wash and wear had been subjected. We have publicized this concept in our May issue and will continue to do so in the months to come.

Our concept is based on a fundamental belief that a label must make a promise to the consumer, a promise that the garment she buys must fulfill. The consumer must have confidence that the garment labeled "wash and wear" can be truly worn, washed and worn again with little or no ironing throughout its expected life. In addition such garments must meet consumer expectancy for durability, colorfastness, shrinkage and other construction characteristics.

We believe the appearance of true wash and wear garments when laundered fit three basic categories, namely—

1. Needs no ironing
2. Needs little or no ironing
3. Needs only touch-up ironing

The first of these, "needs no ironing," means that such garments need no ironing throughout their wearable life. The second, "needs little or no ironing," means that such garments may be worn in some cases without ironing, but for the wearer to look fastidious the garments must be touched up. And third, "needs only touch-up ironing," means that such garments need only a touch-up of seams, lapels, collars and cuffs. We hold that this latter category does not ap-

Dr. Wham is the technical director of Good Housekeeping Institute and the textile editor of Good Housekeeping Magazine. He holds a B.S. degree in textile chemistry from Clemson College, and M.S. from the University of Tennessee and a Ph.D. from Pennsylvania State University.

George S. Wham

ply to fabrics, inasmuch as no fabrics which need touch-up ironing should be characterized as wash and wear. It is a most essential category, however, for garments in which the smallest component, only, may be responsible for the "touch-up ironing" description.

In our wash and wear concept, we hold that garments may be hand washable-drip dry; machine washable-drip dry; machine washable-line dry; machine washable-tumble dry, or, in place of the latter, automatic wash and wear. We emphasize that there must always be placed on the label which of these washing conditions the garment will meet, accompanied by one of the categories mentioned previously, namely, "needs no ironing," "needs little or no ironing," and "needs only touch-up ironing." One without the other is useless, deceitful and meaningless to the consumer.

Hand in hand with information on appearance after laundering must go assurance that there will be no discoloration or loss of tensile strength because of chlorine retention; that colorfastness is adequate, that the garment will not shrink out of fit; and that seams, shoulder pads, buttons, thread, trim and other accessories are compatible in every respect with the fabric from which the garment is made.

Obviously, one of the most damaging blows that can be leveled at wash and wear is a lowering of colorfastness, shrinkage, or strength standards just because a garment may be washed with greater attention—colorfastness must be kept high and, where necessary, fabrics must be stepped up construction-wise to compensate for strength loss due to resin treatment.

Test Methods Employed

The first step in the development of our concept was the development of test methods. The essential features of our tests are these:

The hand washing method involves washing in five gallons of 100°F. water, using 15 grams of soap flakes followed by two rinses at 100°F.

The machine washable test is conducted in an agitator type home washer using a six pound load in 12 gallons of water at a temperature of either 105°F. or 145°F. depending on the garment, giving a water to fabric ratio of 2 to 1, a 12-minute wash cycle followed by 3 complete rinses.

In the case of *machine washable-line dry*—we permit the samples to go through the complete washing cycle including a spin dry of 4 to 6 minutes at approximately 600 rpm. For drip dry garments the machine is stopped before the final spin.

For the tumble dryer—our specifications call for a temperature not exceeding 170°F. and a time of operation sufficient to get the samples completely dry.

All of our tests whether by machine or hand are conducted for a total of five launderings. We evaluate the garments after the fifth laundering. The evaluation is made by a panel of three who view the garments in a dark room with the light source arranged 5 feet from the sample, striking the specimen at an angle of 45°, with the viewer standing 6 feet from the specimen. We have had excellent reproducibility in conducting this method and feel that it is one that can be depended upon.

In merchandising wash and wear according to our concept, the limitations imposed by the number and types of home washers and dryers must be kept in mind.

In 1957, 63% of the approximately 4,000,000 washing machines sold in this country were of the automatic or semi-automatic types; 33% were the wringer and spinner types; and 3% the washer-dryer combinations.

Many Types of Laundering Equipment

Thus, in developing laundering instructions for hang tags, to be realistic one should keep in mind that many homes still have the wringer and spinner types of laundering equipment. This is even more important in the case of dryers. The number of homes with dryers (6,650,000 out of approximately 50,000,000 homes) or 13.7%—whereas 86% (or 41,950,000 homes) have no dryer. This, of course, defines the present limits of the automatic wash and wear concept.

But the encouraging point is that 41,000,000 or 87% of the wired homes in this country have some type of washing machine, and the number without a machine has been decreasing at the rate of 1,000,000 per year since 1954.

Also, in 1947 only 58,000 dryers were sold in this country. Last year consumers purchased 1,600,000 dryers—good news for manufacturer and consumer. There's no question that legitimate wash and wear will eventually mean wash and dry automatically. On the newer home appliances which eventually will replace the older types, there are more controls and a wider choice of selection, all designed for the "set it and forget it" type of laundering. It should be kept in mind that minimum performance to meet one or two very special laundering methods is not enough. There must be performance to spare to meet a wide range of laundering techniques, good and bad, to which garments are subjected under conditions of use. Also, laundering instructions which must *always* accompany wash and wear garments must be simple—unusual procedures involving complicated methods of handling have no place on a label.

Commercial Laundries

And with all the emphasis on washers and dryers, we should not lose sight of the fact that the commercial laundering and drycleaning business is still a million dollar industry in this country and that most consumers will avail themselves of these services for wash and wear shirts, suits, and other garments from time to time.

In conclusion, then, we feel that the "Good Housekeeping" concept of wash and wear meets the requirements for sound, merchandisable standards. We, of course, look to the time when all wash and wear garments can be honestly labeled "wash as you like—never needs ironing." Until then, however, we shall hold that except for rare cases wash and wear means for all honest purposes, "little or no ironing"—that it is fantasy rather than fact unless the *how of laundering* and the *how much of pressing* is shown on the label.

If wash and wear is to be what the 50,000,000 families of this country want it to be, we must be sure that what we, through our promotional efforts, promise the consumer, we do in practice give her. Neither phoney science, nor fancy copy, nor brilliant merchandising devices could convince people for long that there was anything but foolery in the chlorophyl nonsense or the ammoniated claims of tooth paste manufacturers. Wash and wear doesn't have to go down the same dead end street if we're realistic. ■

Testing and evaluation of wash-and wear properties

By George B. Krumholz, Jr.

IN VIEW of the absence of trade standards for evaluating wash and wear, it has been necessary for every laboratory to evolve its own methods of testing and evaluation. Since each laboratory is faced with different types of products, each takes a different viewpoint on wash and wear, and as a result, the methods of testing and evaluation vary significantly. The purpose of this paper is to describe the methods developed and used by the United States Testing Co. to evaluate wash and wear garments and fabrics. First, let me note that we recognize the widely accepted definition for reduced maintenance items. It is: A wash and wear garment is one which will satisfactorily retain its original, neat appearance after repeated wear and launderings with little, if any, touch-up ironing. This means that the garment will be essentially free from undesirable wrinkles both during wear and after laundering and will retain any pressed-in creases or pleats. In addition, the garment must meet the consumer demands for durability, color stability and shrinkage.

pecially important. For that reason we will consider it in some detail.

Furthermore, to be considered as fulfilling its obligation to the wash and wear concept, the product must be correctly labeled, stating the washing and drying procedures necessary for satisfactory consumer performance.

There are essentially four basic washing procedures employed in our laboratories. These are:

1. Hand Wash—Drip Dry
2. Machine Wash—Drip Dry
3. Machine Wash—Hang Dry
4. Machine Wash—Tumble Dry

In many cases washing instructions are furnished to us and in these instances the garment or fabric is evaluated in terms of the submitted washing procedure. Very often, however, a manufacturer wishes to establish a procedure for his product. In this instance, we set up a series of washings designed to determine which procedure yields the most satisfactory results.

FACTORS INFLUENCING WASH AND WEAR PRODUCT APPEARANCE

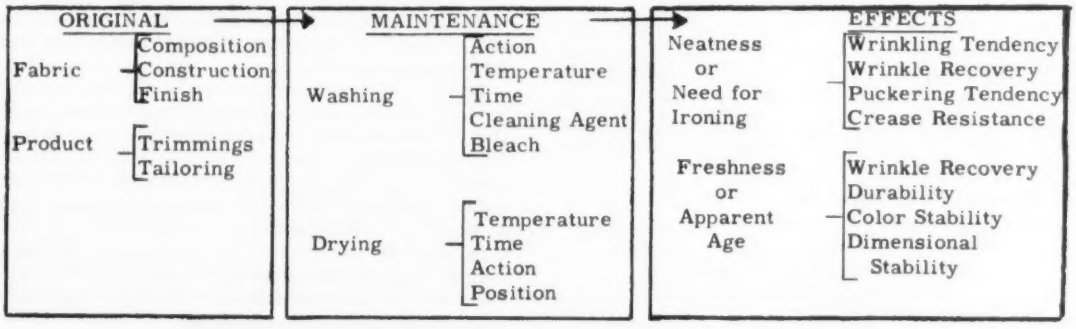


Figure I

The wash and wear concept in the last analysis depends upon two interdependent considerations: The ease or convenience of the maintenance operation, and the excellence of appearance of the product after washing.

Many factors are involved as indicated in Figure I. This chart suggests that in the sequence of factors the effect of special chemical fibers, blends, treatments, modifications or treatments can be cancelled by improper tailoring detail, or by inferior sewing thread, or other structural components. In other words, all factors interact in affecting final appearance. The original product (first column) and its maintenance treatment by the consumer (second column) combine to produce a desirable or an undesirable end result as concerns wearability.

In essence, the ideal wash and wear item should retain a neat, new appearance after washing (and drying) without benefit of special restoration operations. There are several different approaches to achieving this objective as listed in Figure I. No matter what the approach, the washing operation itself is es-

Mr. Krumholz is assistant manager of the textile division of U. S. Testing Co., Inc. A graduate of the New Bedford Institute of Technology, he has been with U. S. Testing since 1937. He is a member of the American Association for Textile Technology, Inc., and of Committee D-13 of the American Society for Testing Materials.

George B. Krumholz, Jr.

FIGURE II
OUTLINE OF WASHING PROCEDURES

Method	Water Temperature	Time	Soap or Detergent Concentration	Rinsing	Drying
Hand Wash Drip Dry	100°F.	3 Min.	Enough to form suds	Twice in 100°F.	Drip dry on non-staining hanger
Machine Wash Drip Dry	Synthetics 100°F. Cottons 140°F.	Full wash cycle	.25%	Stop machine during final rinse before final spin	Drip dry on non-staining hanger
Machine Wash—Hang Dry	Synthetics 100°F. Cottons 140°F.	Full wash cycle	.25%	Complete rinse and final spin	Dry on non-staining hanger
Machine Wash—Tumble Dry	Synthetics 100°F. Cottons 140°F.	Full wash cycle	.25%	Complete rinse and final spin	Tumble dry for 35 Min. at exhaust air temp. below 160°F.

Washing Procedures

The principal factors involved in washing are outlined in Figure II. By applying the entire series an indication can be gained of appearance after the four most common types of consumer treatment:

1. **Hand Wash—Drip Dry.**
   The test garment is washed by hand with light squeezing for three minutes in 100°F. water. Use just enough soap or detergent to form suds. Rinse twice in 100°F. water being careful not to twist or wring. Remove and place on a non-staining hanger to drip dry. If the tested article is a shirt or blouse, the top button should be fastened and the collars, lapels, cuffs, creases of pleats (if present) smoothed with the fingers when partially dry.
2. **Machine Wash—Drip Dry.**
   a) Machine—Agitator type
   b) Time—Wash Cycle:
      Synthetics—Five Minutes
      Cottons—Ten Minutes
   c) Temperature:
      Synthetics—100°F.
      Cottons—140°F.
   d) Wash Load—6 lbs. total
   e) Type of Load:
      Synthetic fabrics with synthetic fiber garments
      Cotton fabrics with cotton garments
   f) Detergent (low sudsing type)—0.25% Concentration
   g) Agitator Speed—50 ± 2 cycles per minute
   h) Spin Speed—600 ± 25 r.p.m.
   Procedure—Fill washer adding detergent. Put in garments when machine is about 1/3 full. Stop washer and remove test garments during final rinse, but before final spin. Hang test garment by same method as specified under "Hand Wash."
3. **Machine Wash—Hang Dry.**
   Machine wash as described above, with the exception that the washer is run through the full washing, rinsing and spinning cycles. Remove test garments and hang them carefully and allow to dry. If test article is a shirt or blouse, button the top button.
4. **Machine Wash—Tumble Dry.**
   Machine wash as described previously through the full washing, rinsing and spinning cycles. Remove test garments and tumble dry for a 35 minute cycle (including ten minute cooling period). The exhaust air temperature should not exceed 160°F. The load should not be over 3 lbs. dry and if necessary, use turkish towels to make up load.

At the conclusion of the drying period, all garments are allowed to hang for at least four hours before they are evaluated.

In view of the large variety of washing machines available to the consumer, it is reasonable to expect that the excellence of wash and wear results will vary from one machine to another. This may be due to the length of washing cycle, type of washing and cooling action, speed and duration of spinning cycle, weight, and type of fabrics making up the wash load. Therefore, in order to compare test results on various garments on a continuing basis, it is essential that all articles be run through the same type of washing machine under identical conditions.

Some of you may recognize that the washer described in our test specification is not of the latest vintage. This seeming lack of modernity is intentional, since our own consumer research findings indicate average washer age across the country to be somewhere in the neighborhood of five years. We do, however, maintain a continually rotating stock of current home washer models and in some cases these are indispensable for laundering procedure development.

Evaluation of Washed Garments

Various approaches have been suggested for the evaluation of wash and wear garments and fabrics. Some of these have included direct observations, matching against photographic standards, and scale ratings of apparent suitability for wearing. In our own laboratories numerous preliminary studies were conducted prior to our development of a unique procedure—unique for the textile industry at least.

Before describing the United States Testing Co. procedure, let me first list some of the difficulties which may be anticipated in the other methods:

1. Photographs are unable to reproduce a valid or reliable representation of actual garments (with re-

PSYCHOMETRIC EVALUATION—An illustration of the method of Paired Comparison under standardized illumination and viewing conditions.

Figure III

spect to wrinkles, creases and general laundering degradation).

2. Verbal, descriptive classification is insufficiently sensitive and accurate and is, therefore, not reliable from judge to judge.

3. Rating scales are vulnerable to errors in interpretation and ambiguity of phrasing.

We, therefore, sought a procedure and preferably an instrument which would provide an absolute measure of suitability for wear. We borrowed for this purpose, a device from the field of perception known as a Tachistoscope. This device enables us to display the test garments or fabrics during a carefully controlled lighting and timing regimen whereby we can obtain a quantitative estimate of the suitability or appropriateness for wear.

Validation studies have revealed that this procedure more accurately predicts consumer satisfaction than any of the previous approaches, yet still retains all of the essential characteristics of a truly scientific test. As an outcome of these tests we have divided the Wash and Wear field into three categories:

A. Wash and Wear (needs no touch-up)
B. Wash and Wear with touch-up ironing
C. Wash and Wear with minimum care (needs only dry ironing)

Psychometric Methods

Several different psychometric methods have been applied. Some require special viewing conditions, as illustrated in Figure III.

1. Threshold Approach. (a) Hanging items to be judged inside dark viewing box and increasing light intensity to point at which objectionable appearance can be noted. The assumption is explicit that poor appearing items can be noted at low light levels. (b) Same viewing box, but increasing time of exposure by fixed increments from one second to two to three and thence up to several seconds. Again, the assumption is that low quality appearance can be noted most quickly.

With this threshold technique, several items are judged in the same session, including fully ironed, touched-up ironed, etc. The point at which each observer indicates that the item has objectionable (non-wearable or non-usuable) appearance is read from a variac or timer setting and is recorded as the end point for the item in question. Enough observers are used to get a stable answer on each item.

2. Paired Comparison. We use a viewing box with full illumination. The operator hangs two items in the device, asking for a comparative judgement against the question: "Which has a better appearance?" Different washing procedures, treatments, ironings, and the like can be sensitively evaluated by this method.

As with the threshold approach and rank order, to be described later in this report, both the absolute and relative desirability of appearance are quantatively assessed. "Is the item 'wash and wear' as neat and/or new in appearance as the equivalent item with full or partial ironing?"

3. Rank Order. Open viewing with special box—judges (one at a time) are asked to rank a series of similar items in order of their neatness and general excellence of appearance. We have found that it is possible to obtain a statistically reliable indication using as few as ten judges.

There is insufficient space here to discuss these three methods and their interpretation in the detail they deserve. Perhaps it is sufficient to say that they have each proved useful in providing a differentiation of the appearance of different types of wash and wear items. They have the advantage at least of face validity in that the final judgement, as in the home, is made by the consumer without the benefit of rating forms, photographs, or other indirect reference paraphernalia. Still if possible, we should like to simplify the procedure so that so many judgements by such a large number of people would not be required. Our researchers are continuing toward this objective.

In order to evaluate fabrics which have not been made up into garments, we take a two yard piece of the fabric and make up a simulated skirt. This simulated skirt has one seam up the side and there is no

other sewing such as waistband and hem, which might affect the evaluation of the fabric itself. These simulated skirts are then subjected to the same washing and drying procedures and evaluations as those used on the garments.

It must also be remembered that where fabrics have been used as test specimens the garments made from these fabrics should be subjected to testing before labeling as wash and wear. This is of prime importance as the body fabric may be completely wash and wear, but if the smallest item of trimming is not, then disaster can follow. Under the headings of trimmings we include: zipper tapes and plackets, shoulder pads, collar linings, and interlinings; interfacings for men's and women's suits, pocketing, seam binding and tapes, sewing thread, welts and underpetticoats.

In addition to the wash and wear characteristics, the ultimate consumer expects, and rightly so, that the product have satisfactory colorfastness, shrinkage control and durability.

Physical Standards for Wash and Wear Garments

The garment, or other textile product, and its component fabrics must demonstrate adequacy when subjected to standardized methods of maintenance, inspection, testing and evaluation as described below:

1. Product Construction.
Garments should be constructed in accordance with good manufacturing practice, with good quality workmanship. Seam allowance and seam construction should prevent raveling or seam failure during washing. Stitching of seams, pockets, etc., shall be of a quality to prevent undue puckering after washing. All components, where necessary, shall be stabilized to conform with the fabric used to construct the garment.

2. Dimensional Stability.
Garments shall be washed at least five times in accordance with the manufacturers instruction and measured in all critical areas before and after one and five washings.

3. Breaking Strength.
The breaking strength of the fabric shall be rated according to its end use category; that is, light, medium, or heavy-weight dress fabric, shirtings, suitings, etc.

4. Wrinkle Recovery.
The wrinkle recovery shall be determined by either the Monsanto Method or the Cold Press Method in the original state and after five washings. Angle of recovering should be at least 230° and the % crease recovery at least 75% warp and 70% filling.

5. Flex Abrasion.
The abrasion properties of fabrics are often impaired by the improper application of resin finishes, therefore, the flex abrasion resistance is used as an evaluation of suitability for the end use category. The end point varies with the fabric and its intended end use.

6. Chlorine Bleach Residual Effect.
This test is required only on fabrics which might be subjected to bleaching by the consumer and are not specifically tagged "Do Not Use Bleach". When tested in accordance with the procedure outlined in AATCC Tentative Test Method 69-52, the fabric shall show no noticeable scorching and shall not lose more than 25% of its strength when tested before and after five consecutive sanforized washings.

7. Colorfastness to Washing.
Samples of the fabric and all accessories must have *good* fastness to the specific washing conditions:

Hand Wash	AATCC Test #1 (105°F soap)
Machine Wash (Warm)	AATCC Test #2A (120°F soap)
Machine Wash (Hot)	AATCC Test #3A (160°F soap and alkali)
Unconditionally Washable	AATCC Test #4A (160°F soap, alkali and chlorine bleach)

8. Colorfastness to Light.
Samples of fabrics and components which will be exposed to light shall be tested and rated as follows:

AATCC Standard Test Method 16A-1958

Light of Minor Importance	10 Hours	Class 2
Light of Moderate Importance	20 Hours	Class 3
Light of Major Importance	40 Hours	Class 4

9. Colorfastness to Perspiration.
The fabric shall have a rating of Class 5 when tested by AATCC Method 15-1957.

10. Colorfastness to Crocking.
The fabric shall have a rating of Class 4 or better when tested by AATCC Method 8-1957.

11. Colorfastness to Atmospheric Oxides of Nitrogen.
The fabric shall have a rating of Class 3 or better tested by AATCC Method 23-1957. This test is used only when applicable.

Some of the problems that we have most frequently encountered in the testing of wash and wear items are:

1. Puckering at the seams and pockets, making it necessary to use special stitching and sewing techniques.
2. Application of resin finishes often influences the established colorfastness characteristics of a dyestuff, necessitating the selection of a more suitable dyeing formula to insure consumer satisfaction in this respect.
3. Unsatisfactory application of the resin often results in:
   a) Yellowing of the garment due to reaction of the finish with the wash formula.
   b) Development of objectionable odors.
   c) Excessive needle cutting in the sewing operation.
   d) Incompatability of some resinous and water repellent finishes when applied to the same fabric producing a chemical interaction resulting in fishy odors.

In the earlier phase of wash and wear, fabrics were made up mainly of the man-made fibers that were hydrophobic in nature. However, in the past year there has been considerable development of wash and wear cottons. When one considers that it takes from 15 to 20 minutes to iron a regular dress shirt, not including dampening time, and comparatively only a few minutes to touch up a wash and wear shirt, one can appreciate the consumer demand for such garments. Even for the most fastidious consumer, the entire shirt could be dry ironed in 5-7 minutes.

The wash and wear concept is continuing to grow throughout the apparel industry, with improvements in both fabric performance and garment fabricating techniques, providing the consumer with better and better garments. ■

Wash-and-wear problems of merchandising

By P. J. Fynn

THE PROMISES of wash and wear are very appealing to the average housewife and she continues to return to the store for wash and wear items in spite of the fact that realization of promised performance has greatly lagged behind anticipation. The concept of wash and wear is really good and, I believe, firmly established as a desirable goal of end-use performance. In spite of failure on the part of most of what is described as wash and wear to deliver to the letter on all the rosy promises of advertising, the consumer relaizes that there are definite time and trouble-saving advantages to the things that are *engineered* to be wash and wear.

The industry problem is to supply goods that are constantly improved and consistent in performance and not to allow price cutting or competitive practices to debase in any way quality and performance. It is the job of textile technologists to keep the schemers and knock-off artists from robbing the consumer of honest performance and to promote the eventual fullfilment of the promises of wash and wear.

The term "merchandising" means considerably more than over-the-counter selling and includes such things as procuring, styling, pricing, advertising and distributing. In our organization these are functions of the buyer who can perform well only if he has a constant stream of information on all these phases.

The laboratory is an important source of aid mainly in procurement and advertising. Knowledge of new things in technology and technical facts concerning the actual items he handles keeps him informed on quality, on performance potential and supplies the basis for proper advertising and promotion. Another aid from the laboratory is in a function known in the science of automation as "feed-back." Feed-back is the return to the early stages of production of a small continuous sampling of the out-put to obtain better control. We call it "returned goods."

In the field of retailing the topic of returned goods as a reliable indication of consumer reaction to a product is complex and subject to much debate and discussion. For one thing the laboratory receives only a meager quantity of the total number of items that fail to give complete consumer satisfaction. It is often estimated that less than ten percent of the dissatisfied customers ever complain to the store. The rest are disgruntled to a greater or lesser degree which reflects upon the prestige and reputation of the store.

In our case far less than one percent of the store returns received ever get to the laboratory. Those that do usually represent the unusual cases beyond the ready understanding of the store manager who can spot most accidents of manufacture as well as anyone. In spite of the fact that our own laboratory tests show that very little wash and wear merchandise is 100% strictly "wash and wear-no iron," not too much is returned for failure to live up to wash and wear promises in advertising.

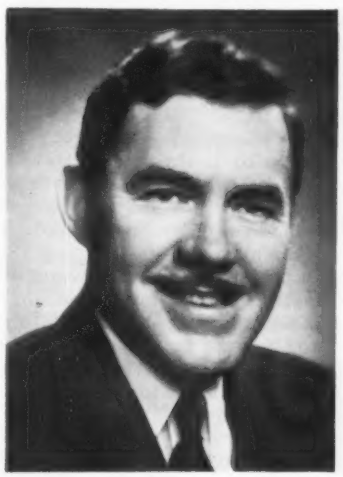
One reason is probably a conservative method of advertising which does not lead the customer to expect more than the goods will deliver; and the other is probably that the customer tends to take all wash and wear promotion with a big pinch of salt.

However, we do get back other failures of the wash and wear finishes tendering of goods; attraction of soil which cannot be subsequently washed out; excessive shrinkage; discoloration; failure of all parts of the same garment to keep the same degree of whiteness; odors from finishing agents on the fabric. These side effects of putting resin on cellulosic fabrics will stimulate customers to return goods more than general failure to deliver smooth-dry, no-iron appearance after laundering. Of course, this feed-back information and any helpful suggestions deduced therefore are passed on to buyers, gray goods sources, finishers and garment makers to prevent, as much as possible, the recurrence of such things.

In the procurement end of merchandising, buyers often find their problems of supply intensified by laboratory insistence on good solid value and insistence on holding to the line of physical properties of the merchandise. This brings up some basic problems. Years of cumulative textile buying experience has sorted the many conventional fabric constructions of various fibers as to end uses. A 136x60 broadcloth of almost any kind of cotton was adequate for shirts, pajamas, dress goods, etc.; 80 square print cloths were always good for percale dress goods, children's clothes, etc.; and challis were good for this, poplins for that and gabardines for the other, all in time-honored constructions of known stamina adequate for the job.

But now everyone wants the old basic fabrics finished for wash and wear. To get it, the buyer may be prepared for the increased cost of finishing on the basis of an enhanced saleability. But suddenly it develops that the goods he'd bought for years and is now getting with a new expensive finish is no good! The lab tells him that it is tender; it pulls apart at the seams; it weakens visibly under a hot iron; it turns

Mr. Fynn is director of research of J. C. Penney Co., Inc. Before joining Penney he was with the Southern Regional Research Laboratory of the Dept. of Agriculture. He is a graduate of Tulane University.



P. J. Fynn

yellow or brown in laundering; it tears too easily. He is between the devil and the deep blue sea—his customers want wash and wear, yet he has to remain competitive.

The industry has to face up to the fact that unless there is a major breakthrough in resin technology it will be necessary to use a heavier gray goods construction in all categories to overcome the inevitable drastic loss of tensile strength, of abrasion resistance and of tear strength caused by even the best applications of the best resin finishes. For the merchant the big problem here is in adequately polic ng the product.

Advertising Must Be Realistic

Another problem in merchandising wash and wear is the general practice of using loose and tricky advertising copy and promotional material. It imposes a hardship on the merchant who is trying to tell a realistic straightforward story and it puts his merchandise to a disadvantage, at least temporarily. It's a wonder the whole sticky mess of weasel-worded wash and wear claims hasn't drawn the attention of regulatory agencies. Nearly the whole industry has been operating on the logic used by little boys-"If he does it I can do it too. If everybody else is doing it I must do it or I won't sell my goods." For immediate gains there is probably much merit in the argument. But you're not going to fool all of the people all of the time. For long range economic well-being it is wiser to advertise realistically.

Many of the resin treated cellulosics and the hydrophobic fibers and their blends have good, honest, easy-care features recognized by the consumer as a boon to effortless rejuvenation of apparel and other textiles. If these desirable features are honestly and forcefully promoted for what they are, they can be as much an inducement to buy as dubious claims of wash and wear predicted on trick interpretations and trickier laundry instructions.

In order for a great many wash and wear items to even approach "no-iron" performance they must be handled so carefully in washing and be dried so messily that if a family owned a dozen wash and wear garments, every wash day would be a nightmare of special handling and special drying. The object of wash and wear is to make wash day easy, not more complicated—yet the amount of merchandise that can be worn with no ironing after washing in the commonly accepted manner—full cycle machine wash at temperatures that get clothes clean and wrung or extracted and dried on the line—those few you can put in your eye.

Consistency of Fabric Performance

A merchandising problem in the procurement end of the business is consistency of fabric performance. Apparently in the present state of the art of applying wash and wear finishes there are a number of the variables not yet under control. Maybe some of them haven't yet been recognized. The best and most meticulous of finishers, doing all in his power to insure uniformity of production, will often put out excellent goods one day or one run and only so-so goods the next. There's usually no time to do re-runs and scarcely time for lab work to screen out the duds. Once a program gets rolling it is split-second scheduling from finisher to store counter. These differences, never too important on the old traditional fabrics, can be very important when so many things like strength, and durability and costs are walking such a narrow fence between success and disaster.

Still another merchandising problem under the heading of procurement is that of getting garment makers to devise and to use new techniques necessary to eliminate puckering problems in seams and the effects of differential shrinkage between tapes, interlinings and other findings. Many of the cut, make and trim problems are still in the by-guess-and-by-jiminy stage of development. Even earnest, quality-minded, vertically-integrated manufacturers don't have these problems reduced to a science.

It's not enough that a good, carefully developed, honestly applied finish be worked out for excellent smooth-drying performance on fabric. A superlative fabric can make an atrocious wash and wear suit, or blouse, or dress.

Hang Tags are Confusing

Then there is the problem of hang tags. Sometimes a garment gets to the store with five or six separate hang tags—it looks like a Christmas tree, it has so much stuff hanging on it—size tags, finisher's tags, cutter's tags, and the merchant's own tag—all almost invariably at odds with each other and thoroughly confusing to the customer.

On a single garment I've seen one tag say "Guaranteed Washable," another say "Handwashable" and the sewn-in label say "Dry Clean Only." No wonder the customer is confused and the salesgirl shrugs. The buyer may want the prestige of the fabric house name to help sell the item. The fabric house puts out its fabric with a fine finish and won't listen to any proposition for leaving off the wash and wear blurb boasting of its degree of washability. The goods have gone into a garment design which will not perform, as a garment, in the manner promoted for the fabric. Even if the buyer instructs the garment maker to ship to *his* store without hang tags, the chances are better than even that the dress will arrive with all tags flying.

It's an up-hill battle all the way for the buyer to get onto the counter a sound, competitively priced wash and wear garment, properly labeled with an honest statement of performance expectation and good instructions for care.

The remarks on the subject of wash and wear expressed by several heads of merchandising departments are often not couched in the most genteel terms. Here are some of the more presentable of them:

"Consistency of performance from lot to lot which is difficult to keep in check when your own goods are being finished is uncontrollable when the cutter is buying the goods."

"Presentation of goods to the public is difficult because of generally disgraceful, indiscriminate labeling."

"There is widespread bastardizing of the products in both production and promotion."

"When dealing with wash and wear we are up to our eye balls—in mud."

In this problem of getting the most out of wash and wear for both the customer and the merchant, the merchant is the middleman—square in the middle between manufacturer's assurances on the one hand and the consumer's complaints on the other. The merchant is more and more dependent upon the integrity of the textile manufacturer because the newer textiles depend upon attributes impossible of detection or evaluation by tactile and visual inspection on the counter. This is particularly true of wash and wear. ■

(For Discussion of Papers see Page 73)

U. S. MAN-MADE FIBER PRICES

This schedule lists the prices of yarns, staple and tow as reported by the producers in June 1958. All prices are given as subject to change without notice.

RAYON FILAMENT YARN

American Bemberg

Current Prices

Regular Production Reel Spun Yarn

Den/Fil	No Turn Skeins	Turned* Skeins & Cones	8½ Turns	High Turn Skeins & Cones 12 Turns	15 Turns	18 Turns
40/30	$1.49	$1.95	....	....	....	$2.08
50/36	1.24	1.50	....	....	....	1.80
65/45	1.14	1.30	....	$1.53	....	1.58
75/60**	1.04	1.18	....	1.41	$1.46	1.49
100/74**	.95	1.08	....	1.33	1.38	1.44
125/60	.94	1.05	$1.09	1.30	....	....
150/120	.93	1.02	1.12	1.27	....	....
300/225	....	.95	....	....	1.08	....
900/372	....	.85	....	....	....	....
1800/744	....	.85	....	....	....	....

* Turn includes twists up to 6 turns on 40 and 50 denier, and up to 5 turns on heavier deniers.
** Spun Dyed Cupracolor Black 15¢ per lb. extra.

"44" HH Spool Spun Yarn

Den/Fil	No Turn Tubes	No Turn Beams	5 Turn Beams	5 Turn Cones	12 Turn Beams	12 Turn Cones	15 Turn Cones
40/30	$1.35	$1.35	....	....	....	....	....
50/36	1.00	1.00	....	....	....	....	....
65/45	1.05	....	....	....	....	$1.42	....
75/45*	.97	....	$1.08	$1.08	$1.31	1.31	$1.39
100/60*	.89	....	1.03	1.03	1.23	1.23	1.31
125/60	.84	....	.99	.99	....	....	....
150/90*	.77	....	.81	.81	1.15	1.15	1.24
150/120	.81	....	....	.93	....	....	....

* Available also in Spun Dyed Cupracolor Black at 15¢ per lb. extra.

"44" HH "Parfe" (Type 51) Spool Spun Yarn

Den/Fil	No Turn Cones	5 Turn Cones	5 Turn Beams	12 Turn Cones	15 Turn Cones
50/36	$1.60	$1.85	$1.85	....	....
75/45	1.45	1.55	1.55	$1.75	$1.85
100/60	1.35	1.45	1.45	1.65	1.75
150/90	1.18	1.25	1.25	1.60	1.70

Nub-Lite (Short Nubbi)

Code	Den/Fil	2½ Turn Natural Cones	2½ Turn Cones*	5 Turn Natural Cones	5 Turn Cones*
1515	160/90	....	....	$1.45	$1.35
1519**	155/90	....	....	1.45	1.35
2008	200/120	....	....	1.06	.96
3002	315/180	$1.10	$1.00	....	....
4011	410/224	1.10	1.00	....	....
6001	600/360	1.08	.98	....	....
8001	860/450	1.08	.98	....	....

* Basic price for cones when dyed. Dyed Colors 30 and 35 cents above basic price. Prices based on 200 lb. dyed lots only. Prices for natural yarn skeins same as natural cone prices.
** Code 1515 can be run in warp or filling.

CUPIONI Type B

Code	Den/Fil	2½ Turn Cones	5 Turn Cones
9610	50/30	....	$2.14
9650	70/45	$1.64	....
9660	100/60	1.48	....
1545	150/90	1.25	....
9720	200/120	1.20	....
9730	285/135	1.10	....
9792	450/225	1.10	....
9814	600/372	1.07	....
9837	940/372	.97	....

"Spun Dyed Cupracolor is spun 150, 285, and 940 deniers at 35¢ per pound extra. Cupracolor Black comes in all deniers."

STRATA SLUB

Code	Den/Fil	Turned Cones	Price
9747	275/225	3½	1.20
9798	450/372	2½	1.10
9823	600/372	2½	1.05
9847	960/372	2½	.97
9885	1290/372	1½	.95
9934	2680/744	1½	.95

"Spun Dyed Cupracolor is spun in 600 and 960 deniers at 35¢ per pound extra."

FLAIKONA

Code	Den/Fil	Turned Cones	Price
9669	150/148	2½	$1.35
9769	300/224	3½	1.40
9807	600/405	2½	1.20
9840	900/450	2½	1.10
9924	2000/744	2½	1.00

"Spun Dyed Cupracolor Black 35¢ per pound extra."

Terms: Net 30 days, F. O. B. shipping point. Minimum freight allowed to consignee's nearest freight station east of the Mississippi River. To points west of the Mississippi River minimum freight allowed to Memphis, Tennessee. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates is sold F. O. B. delivery point.

American Enka Corp.

Current Prices
Effective December 4, 1956
Standard Quality Yarns

Standard Quality Rayon Yarns

A. Natural

Den./Fil.	Luster	Turns	Weaving Cones	Beams	Skeins Long	Skeins Short	Cakes	Knitting Cones
50/18	E	5 S						1.56
50/20	B	2.5 S&Z					1.45	
75/10	B	3 S&Z					1.08	
75/18	E	4 S						1.22
75/30	B	2.5,4S&Z	1.17	1.17			1.08	1.17
75/30	B	8 S	1.22			1.37		1.22
75/45	P,E	2.5, 4,5S&Z	1.17	1.17	1.23	1.37	1.08	1.17
75/60	B,P	3,4 Z	1.22				1.10	1.22
100/14	B,P	3 S&Z				1.12	.96	
100/40	B,E	12 S						1.27
100/40	B,P,E	4,5 S&Z					.96	1.04
100/40	B	6 S	1.10					
100/40,60	B,P	2.5,4S&Z	1.04	1.04	1.08	1.12	.96	1.04
100/60	E	2.5 S	1.06	1.06			.98	
125/40	E	3 Z						.96
150/40	B,P,E	2.1,3S&Z	.91	.91	.94	.99	.86	.90
150/40	B,E	5 S&Z	.91		.94	.99	.86	
150/40	B,E	8 S&Z	.97		1.00	1.05		
150/90	B,E	2.1 S&Z	.92	.92			.87	
200/40	P	3 Z						.82
200/40	B,P	8 S				.95		
250/60	P,E	2.4 Z						.75
300/50	B,E	3 S	.73	.73				
300/60,120	B,P,E	2.1 S&Z	.73	.73		.76	.71	.73
300/60	B	3.5 S	.73	.73		.76	.71	
300/60	B	7 S	.83					
300/40,120 H.T.	B	2.8, 3,4S	.75	.75				
450/80	B	3 S	.70	.70		.72	.68	
600/80,120	B,E	3 S	.69	.69			.67	
900/120	B	3.4 S	.68				.66	
900/120 H.T.	B	3.6 S	.70				.68	

"Jetspun" Colored Yarns

Den./Fil.	Tenacity	Turns	Weaving Cones	Beams*	Cakes	Colors
100/40	Regular	2.5S	1.39	1.39		All
150/40	Regular	2.1S	1.26	1.26		All
200/40	Regular	8.3S	1.27			All
450/80	Regular	3.0S	1.05			All
300/40	High	3.4S	1.10	1.10		All
600/80	High	3.4S	1.06			All
900/120	High	3.4S	1.05	1.05		All

Registered trade mark of American Enka solution dyed rayon yarn.
* Single color.

"Skyloft"

American Enka's Lofted Filament Rayon Yarn
Natural and Jetspun (R)
Types Available and Prices

Denier	Den/Per Filament	JETSPUN Natural	JETSPUN Black	JETSPUN Other Colors
2200	15	$.67	$.79	$.84
2700	15	.65	.75	.82
4300	8	.64	.74	.81
5300	15	.63	.73	.80

American Viscose Corp.

Effective December 14, 1956

Graded Yarns

Denier	Filament	Type	Short Skeins	Long Skeins	All Cones Beams Tubes	Cakes
50	20	Bright & Dull	$	$1.59	$1.56	$1.45
60	10	Bright	....	....	1.41	1.30
75	10-30	Bright	1.24	1.20	1.17	1.08
75	30	Dull	....	....	1.17	1.08
100	14-40	Bright	1.12	1.07	1.04	.96
100	60	Dull	....	....	1.06	.98
150	24-40-60	Bright & Semi-Dull	.99	.94	.91	.86
150	40	Dull	....	....	.91	.86
150	90	Dull	....	....	.92	.87
200	10-44	Bright	.90	.85	.82	.78
250	60	Semi-Dull & Dull	.82	.78	.75	.73
300	30	Dull Flat Fil.	....	....	.79	....
300	44	Bright & Dull	.79	.76	.73	.71
300	234	Dull	....	....	.75	.73
300	120	Rayflex 6-Turns	....	....	.85	.83
450	100	Bright	....	.72	.70	.68
600	100	Bright	....	.71	.69	.67
900	60-100-150	Bright	....	.70	.68	.66
1200	75	Bright	....	.67	.65	....
2700	150	Bright	....	.70	.68	....

Extra Turns Per Inch

75	30	Bright 6-Turns	$1.36	$1.32	$1.29	$ ....
100	40	Bright 6-Turns	1.24	1.19	1.16	1.08
150	40	Bright 6-Turns	1.09	1.04	1.01	.96
200	44	Bright 6-Turns	....	.95	.92	....
300	15	Bright 5-Turns	....	....	.78	....
300	44	Bright 6-Turns	....	.86	.83	.81
600	30	Bright 5-Turns	....	.76	.74	.72

Rayflex Yarns

75	30	Rayflex	$	$	$1.20	$1.11
100	40	Rayflex	....	....	1.07	.99
150	60	Rayflex	....	....	.94	.89
200	75	Rayflex	....	....	.85	.81
300	120	Rayflex	....	....	.75	.73
300	120	Rayflex 6-Turns	....	....	.85	.83
450	120	Rayflex	....	....	.72	.70
600	234	Rayflex	....	....	.71	.69
900	350	Rayflex	....	.72	.70	.68

Super Rayflex Yarns

600	490	Super Rayflex	$	$	$ .78	$ ....
900	720	Super Rayflex	....	....	.77	....

Thick and Thin Yarns

150	40-90	Bright & Dull	$	$	$1.15	$ ....
200	75	Bright & Dull	....	....	1.05	....
300	120	Bright & Dull	....	....	.95	....
450	100	Bright & Dull	....	....	.92	....
490	120	Bright & Dull	....	....	.95	....
900	350	Dull	....	....	1.00	....
920	120	Bright & Dull	....	....	1.00	....

Colorspun Yarns

Currently producing regular and high tenacity at premiums at $.35 per pound.

Viscose Filament Yarns

The following material deposit charges are required:

Metal Section Beams	$170.00 each
Wooden Section Beams	55.00 each
Wooden Section Beam Crates	30.00 each
Metal Section Beam Racks	75.00 each
Metal Tricot Spools—14" flange	30.00 each
21" flange	60.00 each
32" flange	150.00 each
Metal Tricot Spool Racks—14" flange	135.00 each
21" flange	100.00 each
32" flange	75.00 each
Wooden Tricot Spool Crates	20.00 each
Cloth Cake Covers	.05 each

Same to be credited upon return in good condition—freight collect.
Terms: Net 30 days.

Celanese Corp. of America

Current Prices

Effective December 14, 1956

Den.	Fil.	Twist		Beams	Cones	Cakes	Non Shrunk Tubes
#40 and #14 Production							
75/30/3	Bright			....	$1.11	$1.03	....
100/40/2Z	"			$.96	....	....	....
100/40/3	"			.98	.96	.91	....
100/40/5	"			....	1.02	.97	....
100/60/3	"			....	.97	.92	....
125/40/2Z	"			.94	.92	....	....
150/40/3	"			.89	.85	.80	....
150/40/2Z	"			.87	....	....	....
150/40/5	"			....	.91	.86	....
150/40/8	"			....	.97	.92	....
150/40/0	"	NS		....	.71	....	....
300/50/3	"			.72	.71	.69	....
300/50/0	"	NS		....	.63	....	....
#20 Production							
150/40/3	Bright			.87	.83	.78	....
150/40/0	"	NS		....	.71	....	....
150/40/2Z	"			.87	....	....	....
300/50/3	"			.72	.71	.69	....
300/50/0	"	NS		....	.63	....	....
#20 Production							
100/40/3	Dull			....	.96	.91	....
100/60/2Z	"			1.00	....	....	....
100/60/0	"			....	.93	....	....
100/60/5	"			1.04	1.02	.97	....
150/40/3	"			.87	.83	.78	$.77
150/40/0	"	NS		....	.71	....	....
150/90/3	"			....	.90	.85	....
250/60/0	"	NS		....	.67	....	....
250/60/3	"			....	.75	....	.70
#52 Thick & Thin Rayon							
150/60/3	Bright			....	1.15	....	....
450/120/3	"			....	.89	....	....

Terms: Net 30 days. Shipments prepaid to any destination in U.S.A. east of the Mississippi River. Shipments west of the Mississippi will be made on a collect freight basis and allowance will be made for the lowest transportation cost to the point of river crossing.

Prices subject to change without notice.

All previous prices withdrawn.

* No transportation allowed (F.O.B. shipping point).

Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgments of orders.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

Effective with orders May 2, 1958

Bright and Dull

Den.	Fil.	Turns/ Inch Up to		(A) Cones, Beams, Tubes	Cakes
40	20	3	Textile "Cordura"*	$1.90	$1.85
50	20	3		1.63	
50	20	3	Textile "Cordura"	1.65	1.60
50	35	3	Textile "Cordura"	1.70	1.65
75	10	3		1.17	1.08
75	30	3		1.17	1.08
100	15	3		1.04	.96
100	40	3		1.04	.96
100	60	3	Dull	1.06	.98
125	50	3		.96	.90
150	40	3		.91	.86
150	60	3		.91	
150	60	3	Textile "Cordura"	.92	.87
150	90	3	Dull	.92	.87
150	100	3	Dull	.92	.87
300	50	3.5		.73	.71
300	120	3	Textile "Cordura"	.74	.72
450	72	3		.70	.68
600	96	3		.69	.67
600	240	3	Textile "Cordura"	.70	.68
900	50	3		.68	.66
900	144	3		.68	.66
1165	480	3	Textile "Cordura"	.68	.65
1800	100	3		.68	
2700	150	3		.68	

Thick and Thin

100	40	3	#7	1.38	1.38
150	90	3	#7	1.05	
200	80	3	#7	1.05	1.05
450	100	3	#7	.89	.89
1100	240	3	#60	1.00	1.00
2200	480	3	#60	.95	.95

(A) 2¢/lb. additional for cones less than 3# and tubes less than 2#.

Terms: Net 30 days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

* "CORDURA" and "SUPER CORDURA" are DuPont's registered trade-marks for its high tenacity rayon yarn.

Industrial Rayon Corp.

Effective December 21, 1956

Denier	Filament	Turns per In.	Type	2.8 Lb Cones	4.4 Lb Cones	Beams	2.2 Lb Tubes	4.4 Lb Tubes
100	40	2.5 "S"	Bright	1.04		1.04		
150	40	2.5 "S"	Bright	.91		.91		
150	40	2.5 "S"	Luster #4	.91		.91		
150	40	2.5 "S"	Bright intermediate strength	.92				
200	20	2.5 "S"	Bright	.82				
200	40	2.5 "S"	Bright	.82				
300	44	2.5 "S"	Bright	.73		.73		
300	80	2.5 "S"	Bright	.73		.73		
300	80	2.5 "S"	Luster #4	.73		.73		
300	80	2.5 "S"	Bright extra strong	.75		.75		
450	60	2.0 "S"	Bright		.70	.70		
600	90	1.5 "S"	Bright		.69	.69	.69	.69
900	50	2.0 "S"	Bright		.68	.68	.68	.68
900	150	1.5 "S"	Bright		.68	.68	.68	.68

Luster #4 is semi-dull.

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges prepaid with transportation allowed at lowest published rate to all points east of the Mississippi River. PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

North American Rayon Corp.

Current Prices

First Quality Yarns	Den/Fil	Twist	Cones Knitting* Cones	Cones No Twist Knitting Cones	Cones Beams, Tubes** and Weaving Cones	Untreated Cakes
	75/30	3.5			$1.17	$1.08
	75/30	7			1.30	
	75/30	15			1.37	
Normal	75/30	20			1.40	
Strength Yarns	100/40/60 Brt.	3.5			1.04	.96
NARCO	100/40/60	12			1.22	
	125/52/60	3			.96	.90
	125/52	10			1.13	
	150/42/60/75	3	$.90		.91	.86
	150/42	0		$.71		
	300/75	3	.73		.73	
	300/75	0		.63		
	600/98	3	.69		.69	
	900/46	2.5	.68		.68	
	1800/92	2.5	.68		.68	
Semi-High Strength Yarns Hi-NARCO	300/75	3			.74	

* Oiled Cones $.01 Per Pound extra for Graded Yarns only.

** 1 lb. tubes $.02 Per Pound extra for Graded Yarns only.

Terms: Net 30 days, F.O.B. shipping point, minimum freight allowed to consignee's nearest freight station east of the Mississippi River. To points west of the Mississippi River minimum freight to Memphis, Tennessee allowed. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates is sold F.O.B. delivery point.

Prices subject to change without notice.

RAYON HIGH TENACITY YARN and FABRIC

American Enka Corp.

Effective June 1, 1957

Tempra (High Tenacity)

Denier	Elongation	Beams & Cones
1100/480	Low	.58
1230/480	High	.59
1650/720	Low	.55
1820/720	High	.55
2200/960	High & Low	.54

Suprenka (Extra High Tenacity)

1650/720	Low	.58
1900/720	High	.58
2200/960	Low	.57

Terms: Net 30 days, f.o.b. Enka, North Carolina, or Lowland, Tennessee; minimum freight allowed to first destination east of the Mississippi River.

For the DYER and FINISHER

New Syl-Mer Applications

Dow Corning Corp. has announced new applications of Syl-mer, its water repellent, spot and stain resistant silicone finish, for synthetics and blends; for woolens and worsteds; for wools such as knitted wool jersey; for synthetic and cotton blends, and for deep pile fur-like fabrics, such as the new 100% Dynel and Dynel-Orlon coating fabrics. Dow also has developed a silicone finish durable to both washing and dry cleaning for cottons and cotton blends. *For further information write the editors.*

Surface-Active Agents

Jefferson Chemical Co., Inc., has issued a 40-page technical bulletin on adducts of nonylphenol or tridecyl alcohol with ethylene oxide. These surface-active agents are marketed under the trademark Surfonic. The manual includes information on analytical procedures, physical and surface-active properties and typical industrial uses of these nonionic surfactants. *For copies of the bulletin write the editors.*

Anti-Bacteria Chemical

Celanese Corp. of America has received an exclusive license to incorporate Permachem, an antibacteria chemical, in certain of its acetate, Arnel triacetate and rayon yarns during their manufacture. The license was granted by Permachem Corp., developer of the chemical which is said to inhibit growth of common bacteria and mildew, mold and odors originating from bacteria.

Celanese will use Permachem in certain special yarns for lingerie, carpeting and other apparel and home furnishings. The major initial uses foreseen by Celanese will be in acetate filament yarns for tricot fabrics. *For further information write the editors.*

White Flock Adhesive

Lucerne Industries has introduced a new nonyellowing white flock adhesive for use with all synthetic fibers, plastic and metal flitters, ground cork, mica, etc., on cotton, rayon, acetate, nylon, Dacron, Orlon and many other surfaces. The new product, Forever White, is said to have better adhesion while wet during washing than ordinary flock adhesives. It is flexible and cures at low heat in 15 minutes to one hour and at high heat in minutes. *For further information write the editors.*

(Continued on Page 63)

Synthetic Yarns

Package dyed by GLOBE

- ORLON
- DACRON
- NYLON
- ACRILAN
- ARNEL
- ZEFRAN
- TEXTRALIZED YARN
- BLEND YARNS

For fast colors, and superior knitting and weaving qualities, you can rely on Globe package-dyed synthetic yarns.

Globe does package dyeing on tubes, skein and warp dyeing and bleaching, warp mercerizing and sizing.

Globe Dye Works Co
1865 1958

Yarns we process include cotton, rayon, worsted, nylon, linen, blend and novelty yarns, and all synthetics.

4500 WORTH STREET, PHILADELPHIA 24, PA.
JEFFERSON 5-3301

American Viscose Corp.

Effective November 1, 1956
Revised May 29, 1958

Super Rayflex

Denier	Filament	Twist	Beams	Cones
1100	980	0	$.63	$.63
1100	980	4.1Z	.63	....
1100	980*	0-2Z	....	.63
1650	980	0	.58	.58
1650	980	4.1Z	.58	....
1780	980*	0-2Z	....	.58
2200	980	0	.57	.57

* High Elongation Sewing Yarn.

Tire Yarn

1100	490	2.5Z	.59	
1650	980	0	.55	.55
1650	980	3.6Z-4.1Z	.55	
2200	980	0	.54	.54

High Strength

1150	490	2.5Z	.59	.59
1230	490	3.1Z	.59	.59
1650	980	4Z	.55	.55
1875	980	4Z	.55	.55

Super Rayflex, Tire Yarn and High Strength yarns are sold "Not Guaranteed for Dyeing."

Tire Fabric

	Tire Yarn	Super Rayflex
1100/490/2	$.71	$.75
2200/980/2	.625	.655

Above prices based on 80% minimum Carcass, 15% maximum Top Ply, 5% maximum Breaker.

1650/980/2

* Production Factor

525	Open	Carcass	$.635	$.665
300	490	Top Ply	.645	.675
115	275**	Breaker	.67	.70

* Determined by dividing total ends by picks.

** Orders limited to 5% of total 1650 Fabric booked for any given period.

The following deposit charges are made on invoices:

Beams	$55.00 each
Crates (Metal)	75.00 each
Fabric Shell Rolls	3.50 each

Same to be credited upon return in good condition—freight collect
Terms: Net 30 days.

Celanese Corporation of America

Effective December 27, 1955
Supersedes September 12, 1955

Fortisan Yarn Prices

Denier	Packages	Natural	Black
30/2.5/40	2 lb. Cones	$3.00 lb.	$3.35 lb.
60/2.5/80	4 " "	2.40 "	2.75 "
90/2.5/120	4 " "	2.25 "	2.60 "
120/2.5/160	4 " "	2.05 "	2.40 "
150/2.5/180	4 " "	1.95 "	2.30 "
270/2.5/360	4 " "	1.85 "	2.20 "
300/2.5/360	4 " "	1.85 "	2.20 "
60/2.5/80 Olive Green—Spun Dyed—OG106		4 lb. Cones	3.50 lb.

Terms: Net 30 days. Shipments prepaid to any destination in U.S.A. east of the Mississippi River. Shipments west of the Mississippi will be made on a collect freight basis and allowance will be made for the lowest transportation cost to the point of river crossing.

Prices subject to change without notice.

All previous prices withdrawn.

* No transportation allowed (F.O.B. shipping point).

Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgments of orders.

Fortisan-36 Rayon Yarn
Bright

Denier and Filament	Twist	4# cones	8# cones	Tubes	Beams
270/280	0.8Z	$2.30			
300/280	0.8Z	$2.05			
300/280	3Z	$2.20			
400/400	0.8Z	$1.75			$1.70
400/400	0			$1.75	
800/800	0.8Z	$1.25	$1.25		$1.20
800/800	3Z	$1.40			
800/800	0			$1.25	
1600/1600	0.8Z	$1.15	$1.15		$1.10
1600/1600	2½Z	$1.30			
1600/1600	0			$1.15	

Terms: Net 30 days. Shipments prepaid to any destination in U.S.A. east of the Mississippi River. Shipments west of the Mississippi will be made on a collect freight basis and allowance will be made for the lowest transportation cost to the point of river crossing.

Prices subject to change without notice.

All previous prices withdrawn.

* No transportation allowed (F.O.B. shipping point).

Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgments of orders.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.
Current Prices
Effective with shipments April 17, 1957

"Super Cordura"*

Den Fil	Turns/In	All Packages
1100-720	2	$.63
1200-720	2	.63
1530-960	2	.61
1600-960	2	.58
1650-1100	2	.58
1800-1100	2	.58
2200-1440	2	.57
2400-1440	2	.57

Terms: Net 30 days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

* "CORDURA" and "SUPER CORDURA" are DuPont's registered trade-marks for its high tenacity rayon yarn.

Industrial Rayon Corp.

Effective November 1, 1956

Unbleached Bright High Tenacity Yarns

SINGLE END BEAMS AND CONES:

Den.	Fil.	Turns Per In.	4.4 Lb. Cones	Beams	2.2 Lb. Tubes	4.4 Lb. Tubes
1100	480	1.5 "Z"	.59	.59	.59	.59
1650	720	1.5 "Z"	.55		.55	.55
2200	1000	1.5 "Z"	.54	.54	.54	.54
3300	1440	1.5 "Z"	.54	.54	.54	.54
4400	2000	1.5 "Z"	.54	.54	.54	.54

"Above Prices apply to Type 100. Type 200 Tyron Prices are 3¢ more."

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges allowed at lowest published rate to all points east of the Mississippi River.

Prices are subject to change without notice.

North American Rayon Corp.

High-Strength Yarns—SUPER-NARCO		Twist	Cones	Beams
1650	720	3Z		$.55
1850	720	3Z	$.55	
Super High Strength Yarns—				
1650	720	1.5Z	.58	.58

Terms: Net 30 days, f.o.b. shipping point. Minimum freight allowed to consignee's nearest freight station East of the Mississippi River. To points West of the Mississippi River minimum freight to Memphis, Tenn. allowed. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates if sold f.o.b delivery point.

ACETATE FILAMENT YARN

American Viscose Corp.

Current Prices
Effective December 21, 1956

Bright and Dull

* Intermediate Twist

Denier & Filaments	Cones & 4-6 Lb. Tubes	Twister Tubes	Warps	Spinning Cones	Twist Warps
55/14	$1.04	$1.02	$1.05	$.98	$.99
75/20	1.00	.98	1.01	.94	.95
100/28	.95	.93	.96	.89	.90
120/32	.86	.84	.87	.80	.81
150/41	.77	.76	.78	.72	.73
200/54	.73	.72	.74	.69	.70
300/80	.69	.68	.70	.65	.66

* Standard Twist 2¢ additional.

Terms: net 30 days.

Celanese Corp. of America

Current Prices
Effective December 20, 1956

Bright and Dull

Denier and Filaments	Intermediate Twist 4 & 6-Lb Cones	Beams	4 & 6-TM Tubes	4-Pound Cheeses	Spinning Twist Cones	Beams	0 Twist Tubes
45/13	$1.17	$1.18	$	$	$	$1.12	$ ....
55/15	1.04	1.05	....	....	.98	.99	.925
75/20	1.00	1.01	.98	....	.94	.95	.84
75/50	1.02	1.03	1.00	....	....	.97	.89
100/26-40	.95	.96	.93	....	.89	.90	.81
120/40	.86	.87	.85	....	.80	.81	....
150/40	.77	.78	.77	.77	.72	.73	.69
200/52	.73	.74	.73	....	.69	.70	....
300/80	.69	.70	.69	....	.65	.66	.63
450/120	.67	.68	.67	....	.63	.64	....
600/160	.65	.66	.65	....	....	....	....
900/80-240	.63	.64	.63	....	....	....	.61

150 Denier 12-TM Tubes ..... .76
55/0/15 Dull Tricot Beams ..... .985
2-Pound Cheeses ..... .01 Less Than 4-Pound Cheeses
2-BU and 4-Bu Tubes ..... Same Price as 4 and 6-Lb. Cones
2-Lb. Twist Tubes ..... .01 Less Than 4 & 6-Lb. Twist Tubes on 120, 200 and 300 Denier Intermediate Twist

Terms: Net 30 days. Shipments prepaid to any destination in U.S.A. east of the Mississippi River. Shipments west of the Mississippi will be made on a collect freight basis and allowance will be made for the lowest transportation cost to the point of river crossing.

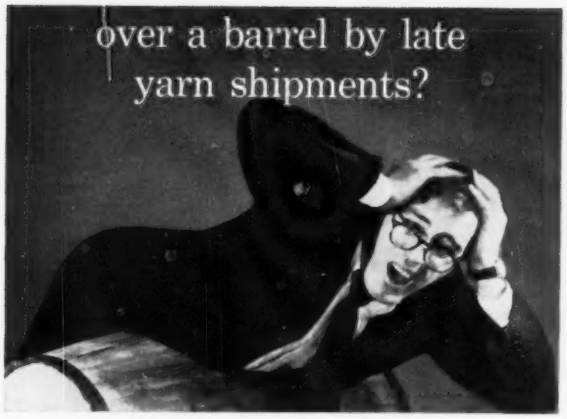
Prices subject to change without notice.

All previous prices withdrawn.

* No transportation allowed (F.O.B. shipping point).

Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgments of orders.



Malina delivers when promised... from the country's largest selection of

RAYON • NYLON • ACETATE YARNS
graded and inferiors—all put ups.

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supported and unsupported

THROWN YARNS

HELANCA® STRETCH YARNS
NYLON • DACRON

Exclusive selling agents for Synthetic Yarns Inc. and Synfoam Yarns Inc., Lowell, Mass.

Malina COMPANY

®T. M.

125 WEST 41st STREET, NEW YORK 36, LOngacre 3-4200

New Mothproofing Agent

A new durable mothproofing agent has recently been introduced by the Arkansas Co. Inc. This new product, Moth Snub D Conc, contains as its active ingredient a chlorinated hydrocarbon with an epoxy group in the molecule, which is capable of reacting with the wool fiber to produce durability.

Moth Snub D Conc is said to be outstanding in this field and has the following advantages:-

1) Easily applied during dyeing.
2) Durable for life of garment to dry cleaning, to laundering and to weathering including exposure to rain and sun. It is also resistant to perspiration, hot pressing and abrasion.
3) Does not affect the hand or appearance of the fabric.
4) Does not cause odor development even under extreme conditions.
5) Highly economical in that an extremely small amount of the active ingredient gives complete protection against moth and carpet beetle larvae.

Moth Snub D Conc is simple to use and does not require any preliminary mixing before adding to the dye bath. In physical consistency, it is a clear amber liquid which is added directly to the dye bath at the start of the dyeing operation. The dyeing is then carried out in the usual manner during which the mothproofing agent is exhausted onto the goods at the same time as the dyes. In most applications, it is necessary to use only six to eight ounces of Moth Snub D Conc per one hundred pounds of wool. *For further information write the editors.*

Crystalline Fiber

Production of crystalline fibers through extrusion and stretching of a new polybutadiene was disclosed by Prof. Giulio Natta, director of Polytechnic Institute, Milan, Italy. He told the American Chemical Society's Division of Polymer Chemistry, at its recent meeting in San Francisco, of principles deduced from studies of new crystalline polymers in Italy. Prof. Natta said the excellent tensile strength of the fibers, in the absence of fillers, and their good elastic properties, support the belief that certain types with a steric purity higher than 95 per cent, will assume an enormous practical importance.

22 Denier Nylon Staple

Industrial Rayon's Nylon Division has commercially introduced 22 denier nylon staple fiber designed specifically for floor coverings. Charles E. Rodgers, Jr., nylon staple fiber sales manager, said tests have established that 22 denier nylon affords certain manufacturing economies and is particularly advantageous when used in a blend with other fibers. He said Artloom Carpet Co. already has introduced 22 denier as part of the 30% nylon component in that firm's 70% wool and 30% nylon fabrics. Other carpet makers are currently evaluating the 22 denier nylon, which is available in both bright and dull lusters in 3, 4½ and 7½-inch lengths. The division also produces 8 and 15 denier bright and dull nylon staple fiber for the carpet industry.

The division recently earned an award of merit from the Associated Business Publications for "an outstanding advertising campaign to insure the continued growth of nylon consumption by the carpet industry."

in yarn dyeing aiming to please...is NOT enough!

ATLANTIC "hits the mark" for color accuracy every time!

YARN DYEING

Rayon • Nylon • Acetate • Stretch Yarns
Cakes • Packages • Skeins

Custom-matched colors. Large dye batches.
Any degree of color fastness. Packaged as desired.

PROMPT DELIVERY

Atlantic Rayon Corporation

125 WEST 41st ST., NEW YORK 36, LONGACRE 3-4200
PLANT: 86 CRARY ST., PROVIDENCE, R. I.

Celaperm Filament Yarn Prices

Denier and Filaments	Intermediate Twist 4 & 6-Lb. Cones	Intermediate Twist 4 & 6-Lb. Beams	Spinning Twist Cones	Spinning Twist Beams
55/15	$1.37	$1.38	$1.31	$1.32
75/20	1.34	1.35	1.28	1.29
100/26	1.28	1.29	1.22	1.23
120/40	1.19	1.20	1.13	1.14
150/40	1.11	1.12	1.06	1.07
200/52	1.05	1.06	1.01	1.02
300/80	1.01	1.02	.97	.98
450/120	.99	1.00	.95	.96
600/160	.97	.98	....	....
900/80	.94	....	....	....

3 to 5 Turns on Cones or Beams — $.02 Additional

Celaperm Black Yarn Prices

Effective March 11, 1955

Denier and Filaments	4 & 6-Lb. Intermediate Twist Cones	4 & 6-Lb. Intermediate Twist Beams	Spinning Twist Cones	Spinning Twist Beams
55/15	$1.17	$1.18	$1.11	$1.12
75/20	1.14	1.15	1.08	1.09
100/26	1.08	1.09	1.02	1.03
120/40	.99	1.00	.93	.94
150/40	.91	.92	.86	.87
200/52	.85	.86	.81	.82
300/80	.81	.82	.77	.78
450/120	.79	.80	.75	.76
600/160	.77	.78	....	....
900/80	.74	....	....	....

Terms: Net 30 days. Transportation prepaid or allowed to any destination in U.S.A. East of Mississippi River. Transportation prepaid to any U.S.A. destination West of Mississippi River, but charge is made for the portion of transportation from river crossing nearest customer's location.

Prices subject to change without notice.

All previous prices withdrawn.

Note: Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our Acknowledgments of Orders.

Arnel Triacetate Yarn Prices
Bright & Dull

Denier and Filament	Cones	Beams	Thick & Thin Cones
55/WKZ/15	$	$1.02	$ ....
55/2Z/15	1.23	1.24	....
75/WKZ/20	....	1.11	....
75/2Z/20	1.16	1.17	....
75/2Z/40	1.24	1.25	....
100/2Z/26	1.10	1.11	....
120/2Z/32	1.01	1.02	....
150/2Z/40	.92	.93	....
200/2Z/52	.87	.88	1.19
300/2Z/80	.85	.86	1.17
450/2Z/120	.84	.85	....
600/2Z/160	.83	.84	1.15

3 to 5 Turns on Cones or Beams—$.02 Additional

Premium for Black Arnel—$.25 Per Pound

Premium for Navy Arnel—$.37 Per Pound

Terms: Net 30 days. Transportation prepaid or allowed to any destination in U.S.A. East of Mississippi River. Transportation prepaid to any U.S.A. destination West of Mississippi River, but charge is made for the portion of transportation from river crossing nearest customer's location.

Prices subject to change without notice.

All previous prices withdrawn.

Note: Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our Acknowledgments of Orders.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

Acetate

Denier & Filament	Zero Twist Tubes	Zero Twist Beams	Low Twist Cones	Low Twist Beams	Intermediate Twist 2 & 4 Lb. ⅝" Tbs.	Intermediate Twist 4 & 6 Lb. Tw. Tbs.	Intermediate Twist Cones	Intermediate Twist Bms.
45-13	$1.03	$1.11		$1.12				
55-18	.925	.985		.99			$1.04	$1.05
55-24	.925	.985		.99			1.04	1.05
75-24	.84	.94		.95		.98	1.00	1.01
75-50				.97		1.00	1.02	1.03
100-32	.81	.89		.90		.93	.95	.96
120-50	.77	.80		.81		.85	.86	.87
150-40	.69	.72	.72	.73	.77	.77	.77	.78
200-60	.68		.69	.70	.73	.73	.73	.74
240-80			.67				.71	
300-80	.63	.65	.65	.66	.69	.69	.69	.70
450-120	.63		.63	.64	.67	.67	.67	.68
600-160					.65		.65	.66
900-44					.63		.63	.64
900-240					.63		.63	.64
1800-88					.61		.61	.62
2700-132					.61		.61	.62
3000-210					.61			.62

(A) Regular Twist (2.9 and 5 T.P.I.)—add $.02 to Intermediate Twist Price.

(B) 1 lb. ⅝" Tubes—add $.02 to 2 & 4 lb. ⅝" Tube Price.

Color-Sealed

Denier & Filament	Zero Twist Tubes	Zero Twist Beams	Low Twist Cones	Low Twist Beams	Intermediate Twist Twisted Tubes 2 Lb.	Intermediate Twist Twisted Tubes 4 & 6 Lb.	Intermediate Twist Cones	Intermediate Twist Beams
55-18	$1.245	$1.315		$1.32	$1.35	$1.35	$1.37	$1.38
75-24	1.18	1.28		1.29	1.32	1.32	1.34	1.35
100-32	1.14			1.23	1.26	1.26	1.28	1.29
150-40	1.03	1.08	1.06	1.07	1.10	1.11	1.11	1.12
200-64	1.00		1.01	1.02	1.04	1.05	1.05	1.06
300-80	.95	.97	.97	.98	1.00	1.01	1.01	1.02

(A) Regular Twist—Add $.02 to Intermediate Twist Price.

Black

Denier & Filament	Zero Twist Tubes	Zero Twist Beams	Low Twist Cones	Low Twist Beams	Intermediate Twist 2 & 4 Lb. ⅝" Tbs.	Intermediate Twist 4 & 6 Lb. Tw. Tbs.	Intermediate Twist Cones	Intermediate Twist Beams
55-18	$1.045	$1.115		$1.12			$1.15	$1.17	$1.18
75-24	.98	1.08		1.09			1.12	1.14	1.15
100-32	.94			1.03			1.06	1.08	1.09
150-40	.83	.86	.86	.87			.91	.91	.92
200-60	.80		.81	.82			.85	.85	.86
300-80	.75	.77	.77	.78	.81		.81	.81	.82
450-120			.75	.76	.79		.79	.79	.80
600-160			.73	.74	.77		.77	.77	.78
900-240			.73	.74	.74		.74	.74	.75

(A) Regular Twist (2.9 and 5 T.P.I.)—add $.02 to Int. Twist Price.

(B) 1 lb. ⅝" Tubes—add $.02 to 2 & 4 lb. ⅝" Tube Price.

Specialty Yarns

Type 20 — Same Price as Regular Yarn

Type C — Same Price as Regular Yarn

Thick & Thin

Denier & Filament	Natural Cones	Natural Beams	Black Cones	Black Beams	Color-Sealed Cones	Color-Sealed Beams
200-64 Int. Twist	1.05		$1.15		$1.35	
200-64 Reg. Twist	1.08	$1.09	1.17	$1.21		

Terms: Net 30 days. Subject to change without notice.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Eastman Chemical Products, Inc.

Tennessee Eastman Co.

Effective December 21, 1956

"Estron"* Yarn, Bright or Dull — White

Denier & Filament	Regular Twist Cones	Intermediate Twist Cones	Intermediate Twist Tubes	Intermediate Twist Beams	Low Twist Cones	Low Twist Beams	Zero Twist Tubes	Tricot Beams Span Twist	Tricot Beams Zero Twist
55/13	$1.06	$1.04	$1.02	$1.05	$.98	$.99	$.92½	$.99	$.98½
75/19	1.02	1.00	.98	1.01	.94	.95	.84	.95	....
75/49	1.04	1.02	....	1.03	....	....	....	....	....
100/25	.97	.95	.93	.96	.89	.90	.81	....	....
120/30	.88	.86	.84	.87	.80	.81	....	....	....
150/38	.79	.77	....	.78	.72	.73	.69	....	....
200/50	.75	.73	....	.74	.69	.70	....	....	....
300/75	.71	.69	....	.70	.65	.66	.63	....	....
450/114	.69	.67	....	.68	.63	.64	....	....	....
600/156	.67	.65	....	.66	.62	.63	.63	....	....
900/230	.65	.63	....	.64	....	....	.61	....	....
Heavier	....	....	....	....	....	....	.56	....	....

Current Prices—December 19, 1955

"Chromspun"*—Standard Colors (Except Black)

Denier & Filament	Regular Twist Cones	Regular Twist Beams	Intermediate Twist Cones	Intermediate Twist Beams	Low Twist Cones	Low Twist Beams
55/13	$1.39	$1.40	$1.37	$1.38	$1.31	$1.32
75/19	1.36	1.37	1.34	1.35	1.28	1.29
100/25	1.30	1.31	1.28	1.29	1.22	1.23
150/38	....	....	1.11	1.12	1.06	1.07
300/75	....	....	1.01	1.02	.97	.98
450/114	....	....	.99	1.00	.95	.96
900/230	....	....	.94	.95	....	....

Current Prices

"Chromspun"*—Black

Denier & Filament	Regular Twist Cones	Intermediate Twist Cones	Intermediate Twist Beams	Low Twist & Span Twist Beams
55/13	$1.19	$1.17	$1.18	$1.12
75/19	1.16	1.14	1.15	1.09
100/25	1.10	1.08	1.09	1.03
150/38	.93	.91	.92	.87
200/50	.87	.85	.86	.82
300/75	.83	.81	.82	.78
450/114	.81	.79	.80	.76
900/230	.76	.74	.75	....

Prices are subject to change without notice.

Prices on special items quoted on request.

Terms: Net 30 days. Payment—U. S. A. dollars.

Transportation charges prepaid or allowed to destination in the United States east of Mississippi River. Seller reserves right to select route and method of shipment. If Buyer requests and Seller agrees to a route or method involving higher than lowest rate Buyer shall pay the excess of transportation cost and tax.

* "Estron" and "Chromspun" are trade-marks of the Eastman Kodak Co.

RAYON STAPLE and TOW

American Viscose Corp.

Current Prices

Rayon Staple

	Bright and Dull
Regular	$ .31
Extra Strength	
1.0 Denier	.34
"Viscose 32A"	.36
"Avisco Crimped"	
1.25 Denier	.34
3.0 & 5.5 Deniers	.32
8.0 & 15.0 Deniers	.34
"Avisco Super L"	
8.0, 15.0 & 22.0 Deniers	.35
Short Staple Blend	.33

Dyeing Notes

(Continued from Page 59)

New Warp Size Adjuvant

Alcoa Oil & Chemical Corp. has announced the commercial availability of a new warp size adjuvant, Alcogum WS-25. The new material, a sodium salt of a polymerized acrylic acid resin, is reported to have equal or improved weaving efficiency at up to 30% savings in size cost. It is said to be especially effective with spun warps of synthetic fibers. *For further information write the editors.*

Adipic Acid Manual

Du Pont's Polychemicals Department has published a new manual on adipic acid—a technical encyclopedia covering the properties, reactions, current uses and potential applications for this widely used chemical. Adipic acid, according to the manual, has established itself in a relatively few years as a cornerstone in the production of synthetic fibers, plastics and urethane foams. *Copies of the manual may be obtained for $1 each by writing the editors.*

New Scouring Agent

Laurel Soap Manufacturing Co. has announced S. D. 200, an amine-fatty acide condensation product of essentially 100% concentration, as an agent for raw wool scouring, fulling and scouring of woolen and worsted piece goods, and scouring of cottons, rayons and acetates. S. D. 200 is reported to be stable to hard water and, used with soap, prevents the formation of hard soap curds. *For further information write the editors.*

Amalgamated Names Agent

Amalgamated Chemical Corp. has appointed Virkler Chemical Co., with offices and warehouse in Greensboro, N. C., as its southern representative. Amalgamated manufactures a complete line of chemicals for the wet processing industry.

Heads AATCC Committee

Herman B. Goldstein, plant manager and research director at the Wood River Junction plant of the Warwick Chemical Co. Division of Sun Chemical Corp., has been named chairman of the American Association of Textile Chemists and Colorists' recently-formed committee for the Evaluation of Finishes for Resistance to Staining and Soiling. AATCC established the committee because of a need by the textile industry for a satisfactory laboratory test which would accurately predict soil resistant properties of textiles during use.

Silicone Catalyst

Proctor Chemical Co. is marketing Curite LTC, a silicone catalyst specifically designed for use with silicone emulsions where high curing temperatures are undesirable. Proctor states the catalyst performs satisfactorily at temperatures of 250 degrees F and enables the user to apply silicones to fabrics where high curing temperatures cause dye sublimation or discoloration. *For further information write the editors.*

Bleaching of Cottons

A new 24-page brochure published by Becco Division, Food Machinery Corp., contains useful information about continuous bleaching of cotton goods with hydrogen peroxide, plus a detailed description of procedures and equipment used in the best current practice. The brochure lists advantages of continuous peroxide bleaching over kier bleaching or other batch bleaching systems. *For free copies write the editors.*

*13¾" and 21" diameter heads

MILTON BEAMS*
(for Nylon and rubber yarns)
GIVE YOU THE BIG
BONUS OF
SUPER STRENGTH

The super strength of Milton's forged head Tricot and Raschel Beams is no idle claim—it's been proven by yarn producers, big mills and small mills alike!

They're light in weight, yet rugged in design to give true dimensional stability without objectionable deflection or distortion. Milton's forged, heat-treated aluminum alloy heads and extra heavy barrels become a one-piece beam by the continuous weld process first introduced in the field by Milton. Trapped ends of yarn or misalignment of keyways are eliminated because there are no mechanical joints!

You name the yarn . . . monofilament, fine denier, low turn or high twist—synthetics or rubber, Milton gives you true-running, well balanced beams to handle unprecedented yardages and extreme pressures!

WRITE FOR FREE BULLETINS . . . No. 49-A on Light Metal Beams and No. 54-S on Steel Beams. The Milton line includes warp beams for broad, narrow fabric, velvet and carpet looms, as well as light metal raschel, tricot and section beams.

MILTON

Over a Quarter Century of Dependability in Yarn Beams
MILTON MACHINE WORKS, INC.
DESIGNERS • ENGINEERS • MANUFACTURERS
MILTON · PENNA.

Rayon Tow

Grouped Continuous Filaments (200,000 Total Denier)
1.5, 3.0 & 5.5 Denier Per Filament ..... .33
9.0 Denier Per Filament ..... .35
Grouped Continuous Filaments (4400/300 & 2000/1500) ..... .65
Prices of other descriptions on request.
Terms: Net 30 days.

American Enka Corp.

Current Prices Effective 1/1/58

Rayon Staple

Regular

	Brt.	Dull
1.5 and 3 denier	$ .31	$ .31

Crimped

8 denier	.34	....
15 denier	.34	.34

Celanese Corp. of America

Current Prices
Effective Dec. 3, 1957

Rayon Tow

	Bright & Dull
1.5, 3, 5.5 D.P.F.	.33
Total denier 200,000	
8 D.P.F.	.35
Total denier 207,000	

Terms: Net 30 days. Transportation prepaid or allowed to any destination in U.S.A. East of Mississippi River. Transportation prepaid to any U.S.A. destination West of Mississippi River, but charge is made for the portion of transportation from river crossing nearest customer's location.
Prices subject to change without notice.
All previous prices withdrawn.
Note: Prices on unlisted items can be obtained upon request.
Orders are subject to conditions of sale appearing on our Acknowledgments of Orders.

Courtaulds (Alabama) Inc.

Effective March 7, 1958

Rayon Staple

	Bright	Dull
1½ and 3 denier	$.31	$.31
Available in 1⅛", 1-9/16" and 2".		

Crimped Rayon Staple

3 and 5½ denier	$.32	$.32
Available in 1-9/16" and 3".		
3 denier	.32	
Available in 2".		

"Coloray" Spun Dyed Rayon Staple

	1½ Den. 1-9/16"	3 Den. 2"	Price per Lb.
	(Code numbers for color and denier)		
Black	1404	1419	37¢
Tan	8004	8019	39¢
Medium Brown	8804	8819	39¢
Silver Grey	1004	1019	39¢
Mocha	7704	7719	39¢
Dark Brown	8604	8619	40¢
Aqua	4704	4719	40¢
Rose	5804	5819	40¢
Dawn Pink	5904	5919	40¢
Ecru	7904	7919	40¢
Slate Grey	0804	0819	43¢
Light Blue	4004	4019	44¢
Sulphur	2004	2019	44¢
Nugget	2304	2319	44¢
Apple Green	5104	5119	45¢
Sage	5304	5319	45¢
Crystal Blue	3904	3919	45¢
Peacock Blue	4604	4619	46¢
Medium Blue	4204	4219	48¢
Dark Blue	4404	4419	49¢
Hunter Green	5404	5419	49¢
Indian Yellow	2504	2519	49¢
Pink	6004	6019	50¢
Turquoise	4804	4819	50¢
Malachite Green	5204	5219	51¢
Red	7004	7019	56¢

(In addition to the above, Black is also available in:
1½ den. 1⅛" (1401) 3 den. 1-9/16" (1416)
3 den. 1⅛" (1413) 5½ den. 3" (1429)

Terms: Net 30 days f.o.b. LeMoyne, Alabama; Minimum transportation allowed to points in U.S.A. east of Mississippi River.

The Hartford Rayon Co.

Div. Bigelow-Sanford Carpet Co., Inc.

Rayon Staple

Effective January 1, 1958
REGULAR

1.5 denier Bright 1½"	.31
5½ denier Bright 1½", 3" and 4½"	.32

VISCALON 66 (Crimped)

8 denier 3" Bright	.34
15 denier 3" Bright	.34
15 denier 3" Dull	.34

"KOLORBON"—Solution Dyed Rayon Staple—3" and 6"

	8 Denier Bright	15 Denier Dull	15 Denier Bright
Cloud Grey	45¢	45¢	....
Sandalwood	45¢	45¢	....
Nutria	45¢	45¢	....
Sea Green	45¢	45¢	....
Mint Green	45¢	45¢	....
Champagne	45¢	45¢	....
Cafe Brown	55¢	....	55¢
Midnight Black	45¢	....	45¢
Gold	48¢	48¢	....
Turquoise	45¢	45¢	....
Melon	48¢	48¢	....
Capri Blue	45¢	45¢	....
Charcoal Grey	45¢	45¢	....
Coco	46¢	46¢	....
Sable	47¢	....	47¢
Tangerine	58¢	....	58¢
Chinese Red	59¢	....	59¢
Larkspur Blue	45¢	45¢	....
Royal Blue	55¢	....	55¢
Lemon Peel	46¢	46¢	46¢
Kelly Green	46¢	46¢	46¢
Bitter Green	55¢	....	55¢

Terms: Net 30 days. Prices are quoted f.o.b. shipping point, lowest cost of transportation allowed, or prepaid. To points West of the Mississippi, lowest cost of transportation allowed to the Mississippi River crossing.

North American Rayon Corporation

Current Prices

Rayon Staple

High Tenacity	Bright
No. 1 (Unshrunk)	
1, 1.5 & 3 deniers	.40
No. 2 (Preshrunk)	
1, 1.5 & 3 deniers	.40

Rayon Tow

2200 denier, 1.0 and 1.5 D/F	57.5
4400 denier, 1.0 and 1.5 D/F	47.5

ACETATE STAPLE and TOW

Celanese Corp. of America

Current Prices
Effective March 17, 1958
(Most Deniers Available in Bright or Dull Luster)

Staple

Celanese Acetate Staple

2, 3, 5.5, 8, 12 & 17 Denier (Regular Crimp, Type HC, Type D)	$.36
35 Denier	.38
50 Denier	.40
Type F—5.5, 8, 12, 17 Denier	.35
Type K—(Available under Celanese License Agreement)	.39
⅝" to ⅞" length (All Deniers)	.03 (Premium)
35 Denier Flat Filament Acetate	.40
Non-Textile Acetate Fibers	.28*

Tow (Celatow)

2, 3, 5.5, 8, 12 & 17 Denier	$.37
35 Denier	.40
50 Denier	.42

Terms: Net 30 days. Transportation prepaid or allowed to any destination in U.S.A. east of Mississippi River. Transportation prepaid to any U.S.A. destination west of Mississippi River, but charge is made for the portion of transportation from river crossing nearest customer's location.
Prices subject to change without notice.
All previous prices withdrawn.
* No transportation allowed (F.O.B. shipping point.)
Note: Prices on unlisted items can be obtained upon request.
Orders are subject to conditions of sale appearing on our acknowledgments of orders.

Arnel Triacetate Staple and Tow

	Bright & Dull
Arnel Triacetate Staple	
2.5 Individual Denier	$.55
5.0 Individual Denier	.55
Arnel Triacetate Tow	
2.5 Individual Denier 114,000 Total Denier	$.60
5.0 Individual Denier 90,000 Total Denier or 180,000 Total Denier	.60

Packaged on Ball Warps
Terms: Net 30 days. Transportation prepaid or allowed to any destination in U.S.A. east of Mississippi River. Transportation prepaid to any U.S.A. destination west of Mississippi River, but charge is made for the portion of transportation from river crossing nearest customer's location.
Prices subject to change without notice.
All previous prices withdrawn.
Note: Prices on unlisted items can be obtained upon request.
Orders are subject to conditions of sal. appearing on our acknowledgments of orders.

NON CELLULOSIC YARN

NYLON

Allied Chemical Corporation

Caprolan®†

Effective May 20, 1958

Denier	Filament	Turn/In.	Twist	Type**	Package	1st Grade Price/Lb.
560	32	1	Z	HB	Aluminum Tube	$1.39
840	136	½	Z	HBT	Aluminum Tube	1.20
840	136	½	Z	HBT	Beams	1.20
Heavy Yarn						
2100	408	0	O	HB	Paper Tube*	$1.18
2100	112	0	O	HB	Paper Tube*	1.20
2500	408	0	O	HB	Paper Tube*	1.18
3360	544	0	O	HB	Paper Tube*	1.17
4200	680	0	O	HB	Paper Tube*	1.17
4200	224	0	O	HB	Paper Tube*	1.19
5000	816	0	O	HB	Paper Tube*	1.17
5000	280	0	O	HB	Paper Tube*	1.19
5800	952	0	O	HB	Paper Tube*	1.17
7500	1224	0	O	HB	Paper Tube*	1.16
10000	1632	0	O	HB	Paper Tube*	1.16
15000	2448	0	O	HB	Paper Tube*	1.16

Textile News Briefs

Washable Acrilan Blankets

American Institute of Laundering has awarded its Certified Washable Seal to blankets made of 100% virgin Acrilan acrylic fiber, marking the first such award to a blanket made of 100% man-made fiber. Laboratory tests conducted on the blankets, bearing Chemstrand's Seal of Quality, revealed that they can be washed safely by commercial laundries under conditions recommended for blankets made of traditional fibers. The Institute also reported the 100% Acrilan fiber in blankets makes them easily launderable in light color washing formulas with temperatures up to 120°F.

Polyethylene Packaging

Shellmar-Betner Flexible Packaging Division of Continental Can Co. has published "It's In The Bag," a folder which tells the story of polyethylene packaging for textile products, and the advantages of such packaging to the manufacturer, retailer and consumer. The folder also contains information on the types of bags being used, and printed design possibilities. *For free copies write the editors.*

Cabin Crafts Expands

Cabin Crafts, Inc., has signed contracts for the construction of a 75,000 square foot addition to its Springdale Ga., plant. The addition which will give the Springdale plant over 200,000 square feet is scheduled to be completed by August 1. It will place the firm's entire carpet operation under one roof, with the exception of a small amount of piece dyeing which will be done in the firm's Morris Street plant in Springdale, according to R. G. McCamy, president.

Book on Cotton Revised

The third edition of "Cotton," by Harry Bates Brown and Jacob Osborn Ware, has been issued by McGraw-Hill Book Co., Inc. The authors, both experts in agronomy, trace cotton from the field to its finished product, point up its technological importance in the field of all textile fibers, and emphasize its great value to the economy of this country and the world. This third edition, almost entirely rewritten, contains much new material resulting from research stimulated by increased mechanization and competition of foreign cotton growths and man-made fibers. The 566-page books cost $12 per copy. *For further information write the editors.*

Foreign Licensing Booklet

"Foreign Licensing—Questions and Answers," is the name of a booklet recently issued by Pegasus International Corp. Executives interested in such business activity will find most of their answers in the booklet. Subjects covered include: the advantages and disadvantages; selecting the proper partner; patents; royalty fees and their collection in dollars; evaluating potential markets, and similar topics.

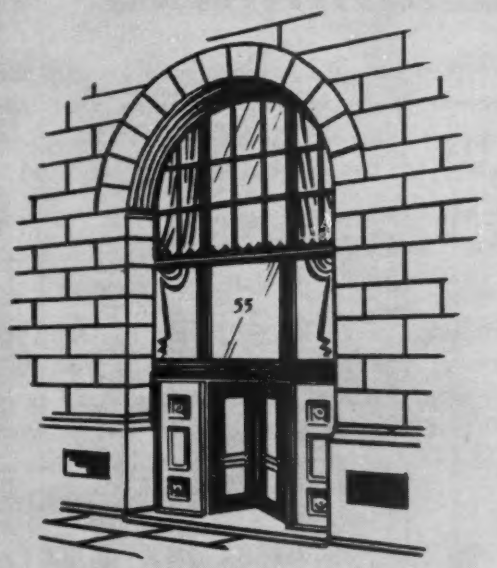
The booklet may be obtained free by writing to the editors.

New Stretchable Paper

West Virginia Pulp and Paper Co. has started commercial production of a stretchable paper said to have several times the tear-resistance of conventional papers. The manufacturing process was developed by Sanford, Cluett, who developed the process behind the "Sanforized" trademark for shrinkage controlled cotton fabrics. Initially, applications of the new paper will be confined to the kraft paper field, a utility grade of coarse paper widely used for shipping sacks, grocery bags, and wrapping paper.

Our service is tailored to provide all the working capital any qualified client needs, without increased borrowing, diluting profits or interfering with management.

Information available for any manufacturer or distributor with $500,000 or more annual sales.



Textile Banking Company

55 Madison Avenue, New York 10, N.Y.

Providing operational financing for the apparel, electronics, furniture, leather, plastics and textile industries.

Subsidiaries:

T. B. C. Associates, Inc., New York Southwest Texbanc, Inc., St. Louis

Terms—Net 30 days.
Prices subject to change without notice.
All prices quoted F.O.B. Shipping Point.
Following are invoiced as a separate item.
Bobbins—45 cents each.
Aluminum Tubes—40 cents each.
Beams—$220.00 each.
Cradles for Beams—$53.00.
* Paper Tubes non-returnable, no charge.
** Type is used to describe luster and tenacity

B—Bright.
H—High Tenacity.
T—Heat Stabilized.

Lowest freight cost prepaid or allowed east of Mississippi River, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

† Allied Chemical's polyamide fiber.

American Enka Corporation

Enka Nylon Yarn Prices

Effective March 13, 1958

Denier & Filament	Twist	Luster	Tenacity	Package	Yarn Wt. Per Pkg.	Price/Pound Std.	Price/Pound Sub.
15 monofilament	0.5Z	Semi-dull	Normal	Pirn	1 lb.	$5.25	$5.00
15 monofilament	0.5Z	Dull	Normal	Pirn	1 lb.	5.30	5.05
15/2	0.5Z	Semi-dull	Normal	Pirn	1 lb.	7.37	6.70
18/2	0.5Z	Semi-dull	Normal	Pirn	1 lb.	6.65	6.10
20 monofilament	0.5Z	Semi-dull	Normal	Pirn	1 lb.	4.95	4.50
20/2	0.5Z	Semi-dull	Normal	Pirn	1 lb.	5.55	5.05
30/4	0.5Z	Semi-dull	Normal	Pirn	1 lb.	2.62	2.42
30/6	0.5Z	Semi-dull	Normal	Pirn	2 lb.	2.36	2.21
40/8	0.5Z	Semi-dull	Normal	Pirn	2 lb.	2.01	1.81
50/13	0.5Z	Semi-dull	Normal	Pirn	2 lb.	1.91	1.76
200/16	0.9Z	Bright	Normal	Cone	4 lb.	1.49	1.44
200/16	0.5Z	Bright	Normal	Beam		1.54	....
200/34	0.9Z	Bright	Normal	Cone	4 lb.	1.49	1.44
200/34	0.5Z	Bright	Normal	Beam		1.54	....

Pirns charged at $.25 or $.45 each, depending upon type. Deposit refunded upon return of pirn in good condition. Cones are non-returnable. Beams and cradles are deposit carriers and remain property of American Enka Corporation.

Terms: Net 30 days. Minimum common carrier transportation charges will be pre-paid and absorbed to the first destination on or east of the Mississippi River. In pre-paying transportation charges, seller reserves the right to select the carrier used.

The Chemstrand Corp.

Current Prices

Effective June 2, 1958

Denier	Filament	Twist	Type*	Package	Standard Price/Lb.	Second Price/Lb.
10	1	O	SD	Bobbins	$8.42	$7.81
15	1	O	SD	Bobbins	5.25	5.00
15	1	O	SD	Spools	5.36	....
15	1	O	D	Bobbins	5.30	5.00
15	1	O	D	Spools	5.41	....
20	7	Z	D	Bobbins	2.96	2.61
30	10	Z	SD	Bobbins	2.36	2.21
30	10	Z	D	Bobbins	2.41	2.21
30	10	Z	HSD	Bobbins	2.36	2.21
30	26	Z	SD	Bobbins	2.49	2.21
40	7	Z	SD	Bobbins	2.11	1.81
40	10	Z	SD	Bobbins	2.01	1.91
40	13	Z	SD	Bobbins	2.01	1.91
40	13	O	SD	Draw Wind	2.01	1.91
40	13	Z	SD	Spools	2.11	....
40	13	Z	D	Bobbins	2.06	1.96
40	13	Z	D	Spools	2.16	....
50	17	Z	SD	Bobbins	1.91	1.76
50	17	Z	SD	Draw Wind	1.91	1.76
70	34	Z	SD	Bobbins	1.71	1.66
70	34	O	SD	Draw Wind	1.71	1.66
70	34	Z	SD	Spools	1.81	....
70	34	Z	B	Bobbins	1.71	1.66
70	34	O	B	Draw Wind	1.71	1.66
70	34	Z	D	Bobbins	1.76	1.66
70	34	Z	D	Spools	1.86	....
70	34	Z	HB	Bobbins	1.76	1.66
80	26	Z	SD	Bobbins	1.71	1.56
100	34	Z	SD	Bobbins	1.65	1.60
100	34	Z	SD	Spools	1.75	....
100	34	Z	HB	Bobbins	1.70	1.60
140	68	Z	SD	Bobbins	1.60	1.55
140	68	Z	SD	Spools	1.70	....
140	68	Z	B	Bobbins	1.60	1.55
200	34	Z	B	Bobbins	1.49	1.44
200	34	O	B	Draw Wind	1.49	1.44
210	34	Z	HB	Bobbins	1.49	1.44
210	34	O	HB	Draw Wind	1.49	1.44
210	34	Z	HB	Spools	1.54	....
210	34	Z	HB	Beams	1.54	....
210	34	Z	RHB	Bobbins	1.59	1.54
260	17	Z	HB	Bobbins	1.49	1.39
260	17	Z	HB	Spools	1.54	....
420	68	Z	HB	Bobbins	1.39	1.29
520	34	Z	HB	Bobbins	1.39	1.29
630	102	Z	HB	Bobbins	1.39	1.29
780	51	Z	HB	Bobbins	1.39	1.29
840	140	Z	HB	Beams	1.20	1.10
840	140	Z	HB	Tubes	1.20	1.10
840	140	O	HB	Draw Wind	1.20	1.10
840	140	Z	RHB	Beams	1.20	1.10
840	140	Z	RHB	Tubes	1.20	1.10
1040	68	Z	SD	Tubes	1.34	1.24
1040	68	Z	HB	Tubes	1.34	1.24
1680	280	Z	HB	Tubes	1.20	....
15120	2520	Z	RHB	Tubes	1.16	....

* *Types*: D—Dull; SD—Semi-dull; B—Bright; H—High tenacity.

Bobbins are invoiced at 25¢ or 45¢ each, depending on type; tubes are invoiced at 40¢ each; spools invoiced at $77.00 and $95.00 depending on type; and beams and crates for beams are invoiced at $220 and $25 respectively.

Prices subject to change without notice.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices — Nylon Yarn

Denier & Filament	Turns/Inch & Twist	Type	Package	1st Grade	2nd Grade
7-1	0	200	Bobbin	$9.47	$8.82
10-1	0	200	Bobbin	8.42	7.82
12-1	0	200	Bobbin	7.35	6.85
15-1	0	200	Beam	5.36	....
15-1	0	200	Bobbin	5.25	5.00
15-1	0	680	Beam	5.41	....
15-1	0	680	Bobbin	5.30	5.00
20-1	0	200	Bobbin	4.95	4.50
14-2	0.2Z	200	Bobbin	7.90	7.30
17-2	0.2Z	200	Bobbin	7.05	6.50
20-2	0.2Z	200	Bobbin	5.55	5.05
15-3	0.2Z	200	Bobbin	6.10	5.60
21-3	0.2Z	200	Bobbin	5.48	5.05
20-7	0.5Z	200	Bobbin	2.91	2.61
20-7	0.5Z	200	Beam	3.02	....
20-7	0.5Z	680	Bobbin	2.96	2.61
20-7	0.5Z	680	Beam	3.07	....
20-20	0.7Z	209	Bobbin	6.00	....
28-4	0.2Z	200	Bobbin	2.81	2.61
30-10	0.5Z	200	Bobbin	2.36	2.21
30-10	0.5Z	200	Tricot Bms.	2.46	....
30-10	0.5Z	680	Bobbin	2.41	2.21
30-10	0.5Z	680	Tricot Bms.	2.51	....
30-26	0.5Z	200	Bobbin	2.49	2.21
40-1	0	100	Bobbin	4.03	3.75
40-7	0.5Z	200	Bobbin	2.11	1.81
40-13	0.5Z	200	Bobbin	2.01	1.91
40-13	0.5Z	200	Tricot Bms.	2.11	....
40-13	0.5Z	400	Bobbin	2.13	1.90
40-13	0.5Z	680	Bobbin	2.06	1.96
40-13	0.5Z	680	Tricot Bms.	2.16	....
40-34	0.5Z	200	Bobbin	2.21	1.81
50-10	0.5Z	200	Bobbins	2.11	1.76
50-17	0.5Z	200	Bobbin	1.91	1.76
50-17	0	200	Tubes	1.91	1.76
50-17	0.5Z	680	Bobbin	2.01	1.76
60-20	0.5Z	200	Bobbin	1.82	1.65
70-17	0.5Z	200	Bobbin	1.71	1.66
70-34	0	100	Tubes	1.71	1.66
70-34	0.5Z	100/200	Bobbin	1.71	1.66
70-34	0	200	Tubes	1.71	1.66
70-34	0.5Z	300	Bobbin	1.76	1.66
70-34	0.5Z	680	Bobbin	1.76	1.66
70-34	0	680	Tubes	1.76	1.66
80-26	0.5Z	200	Bobbin	1.71	1.56
90-26	0.5Z	200	Bobbin	1.76	1.66
90-44	0.5Z	200	Bobbin	1.86	1.76
100-34	0.5Z	200	Bobbin	1.65	1.60
100-34	0.5Z	300	Bobbin	1.70	1.60
100-34	0	300	Tubes	1.70	1.60
100-34	0.5Z	680	Bobbin	1.70	1.60
100-50	0.5Z	200	Bobbin	1.71	1.60
140-68	0.5Z	100	Bobbins	1.60	1.55
140-68	0	200	Tubes	1.60	1.55
140-68	0.5Z	200	Bobbin	1.60	1.55
140-68	0.5Z	300	Bobbin	1.65	1.55
200-20	1Z	100	Bobbin	1.49	1.44
200-34	0	100	Tubes	1.49	1.44
200-34	0.7Z	100	Bobbin	1.49	1.44
200-34	0.7Z	680	Bobbin	1.54	1.44
200-68	0.7Z	200	Bobbin	1.56	1.46
210-34	0	300	Tubes	1.49	1.44
210-34	0.7Z	300	Bobbin	1.49	1.44
210-34	0.7Z	300	Beam	1.54	....
210-34	0.7Z	330	Bobbin	1.59	1.44
260-17	1Z	300	Bobbin	1.49	1.39
400-68	0.7Z	100	Bobbin	1.39	1.29
420-68	1Z	300	Bobbin	1.39	1.29
520-34	1Z	300	Bobbin	1.39	1.29
780-51	1Z	300	Bobbin	1.39	1.29
800-140	0.5Z	100	Bobbin	1.39	1.29
840-140	0.5Z	300/700	Al. Tbs	1.20	1.10
840-140	0.5Z	300/700	Beam	1.20	....
1680-280	0.5Z	300/700	Al. Tbs	1.20	1.10
1680-280	0.5Z	300/700	Beam	1.20	....

Color-Sealed Yarn

Denier & Filament	Turns/Inch & Twist	Type	Package	1st Grade	2nd Grade
30-10	0.5Z	140	Bobbin	$2.71	$2.56
40-13	0.5Z	140	Bobbin	2.36	2.16
70-34	0.5Z	140	Bobbin	2.06	2.01
100-34	0.5Z	140	Bobbin	2.00	1.95
100-34	0	140	Tubes	2.00	1.95
200-34	0.7Z	140	Bobbin	1.84	1.79
260-17	1Z	140	Bobbin	1.84	1.79

Industrial Yarn				Price/Lb.
2520-420	0	300/700	Paper Tube	$1.18
4200-700	0	300/700	Paper Tube	1.17
5040-840	0	300/700	Paper Tube	1.17
7560-1260	0	300/700	Paper Tube	1.16
10080-1680	0	300/700	Paper Tube	1.16
15120-2520	0	300/700	Paper Tube	1.16

These prices are subject to change without notice. Terms: Net 30 Days.

More Polyvinyl Emulsions

Celanese Corp. of American has completed a new manufacturing unit at its Belvidere, N. J., plant to produce polyvinyl acetate emulsions. Annual capacity of the plant is in excess of 20,000,000 pounds. While used principally for water-thinned latex paint, polyvinyl acetate emulsions also are used for adhesives, nonwoven fabrics, textile finishing and paper coating.

'Scotchgard' Licensees

Minnesota Mining and Manufacturing Co. has licensed 13 spongers in 11 major U. S. cities to apply Scotchgard brand stain-repeller, oil and water-repellent fluorochemical finish, to upholstery, drapery, and apparel fabrics. Sponger application is aimed mainly at the piece goods business originating from the garment industry, department and dry goods stores, jobbing houses, and decorators the 3M company said.

The firm also announced that National Upholstery Supply Co., Inc., is the first jobber to offer a wide variety of upholstery fabrics treated with the Scotchgard stain-repeller. The fabrics are available in 21 patterns and include cotton prints, damasks, nylons and nylon friezes. They are priced from $4 to $18 a yard.

Vocational Guidance

"Home Economics—Careers and Homemaking," by Dr. Olive A. Hall, offers vocation guidance and helps young people decide on a career related to individual interests and abilities. The author, assistant professor of home economics at the University of California and a member of the Advisory Committee for the Student Counseling Center, cuts through all areas with an orientation chapter devoted to a variety of careers, including clothing textiles, and research. The 301-page book, published by John Wiley & Sons, is priced at $4.25.

New Book on Fabrics

"Focus on Fabrics," described as a complete fabric library in one volume, has been published by the National Institute of Drycleaning, 909 Burlington Ave., Silver Spring, Md. Dr. Dorothy Siegert Lyle, the author; spent two years in preparing the over 500-page book.

Part One of the book is on the selection and care of fabrics and contains 174 fabric samples. Part Two describes fabric behavior in drycleaning, and is illustrated with 100 black-and-white photographs and 51 full-color pictures. Copies of the book are priced at $27.50 each for members, colleges, institutions, etc., and $35.00 for nonmembers.

Heineman Gets New Owner

Oscar Heineman Corp. has been acquired by Gerald S. Beck and Arnold Kleinman of Beck-Kleinman Corp. The Heineman facility has started production of Textralized textured synthetic filament yarns at a new plant in Patchogue, N. Y. The acquisition included a license from Joseph Bancroft & Sons Co. for processing of yarns used in products sold under the Ban-Lon trademark. The Patchogue plant will make all deniers and sizes of yarn. Victor A. Schiffer has joined Oscar Heineman as vice president in charge of production.

New Anthaquinone Plant

American Cyanamid Co. plans to build a multi-million dollar anthraquinone manufacturing facility at its Bround Brook, N. J. plant, using a new process developed in the company's research laboratories. The new unit, to be operated by Cyanamid's organic chemicals division, will replace and expand existing anthraquinone facilities, and will also provide additional production capacity for methyl anthraquinone, napthoquinone and phthalic anhydride. Cyanamid will be the only commercial producer of napthoquinone in the U. S. when the new unit is completed.

NON-FLUID OIL
TRADE MARK REGISTERED

FOR BETTER SPINNING

In your spinning room, smooth, dependable operation is essential for quality yarn production. This means you should use NON-FLUID OIL, the lubricant that stays in the bearings, regardless of speed and temperature.

Ordinary oils creep or spatter out of spinning frame roll stands, causing high oil and application costs, plus damaged roll covers and stained yarns.

NON-FLUID OIL stays in roll stands—lubricating dependably until entirely consumed—and protects roll covers and saves on oil and application expense.
Get positive proof of this performance of NON-FLUID OIL. Send for Bulletin T-13 and free testing sample . . . no obligation to you.

NEW YORK & NEW JERSEY LUBRICANT COMPANY
292 MADISON AVE., NEW YORK 17, N. Y.
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So. Dist. Mgr.: Lewis W. Thomason, Jr. Charlotte, N. C.
WAREHOUSES
Birmingham, Ala. Atlanta, Ga. Columbus, Ga. Charlotte, N. C. Greenville, S. C. Chicago, Ill. Springfield, Mass. Greensboro, N. C. Detroit, Mich. Providence, R. I. St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

Types

Type 100—Bright, normal tenacity.
Type 140—Bright, color-sealed, black, normal tenacity.
Type 200—Semidull, normal tenacity.
Type 209—Semidull, normal tenacity.
Type 300—Bright, high tenacity.
Type 330—Bright, high tenacity, more heat & light resistant.
Type 400—Semidull, high tenacity.
Type 680—Dull, normal tenacity.
Type 700—Bright, high tenacity.

Freight Terms—Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Following are invoiced as a separate item.
Bobbins—25 cents or 45 cents depending on type
Aluminum Tube—40¢ each
Draw Winder Tubes—$.70 or $1.00 depending on type
Tire Cord Beams—$220.00 each
Cradles for Tire Cord Beams—$115.00 each
Tricot Beams—$95.00 each
Cradles for Tricot Beams—$130.00 each
(Beams and Cradles are deposit carriers and remain the property of E. I. du Pont de Nemours & Co., Inc.)

POLYESTER E. I. du Pont de Nemours & Co.

Textile Fibers Dept.
Current Prices

"Dacron"*

Denier & Filament	Turns/Inch	Luster	Type*	Tubes 1st Gr.
30-14	0	Bright	55	$2.81
30-20	0	Semidull	56	2.81
40-27	0	Semidull	56	2.41
40-27	0	Bright	55	2.41
40-27	0	Dull	57	2.46
70-34	0	Semidull	56	2.01
70-14	0	Bright	55	2.01
70-34	0	Bright	55	2.01
70-34	0	Dull	57	2.06
100-34	0	Semidull	56	1.94
140-27	0	Bright	55	1.89
150-34	0	Semidull	56	1.91
220-50	0	Bright	51	1.84
250-50	0	Bright	55	1.86
1100-250	0	Semidull	59	1.50
1100-250	0	Bright	51	1.50

Terms: Net 30 Days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Yarn Types

* Type:
Type 51—Bright, high tenacity.
Type 55—Bright, normal tenacity.
Type 56—Semidull, normal tenacity.
Type 57—Dull, normal tenacity.
Type 59—Semidull, high tenacity.

Tubes are invoiced as a separate item at $.70 each.

* "DACRON" is DuPont's registered trade-mark for its polyester fiber.

SARAN FIBERS

The Saran Yarns Company — Odenton, Maryland

The Hall Company (Selling Agent)
41 East 42 Street, New York 17, N. Y. (Oxford 7-8996)

Current Prices:

CONTINUOUS FILAMENT

Type	Twist p. i.	Natural	Colors
1240/10	3	$1.32	$1.37
750/20*	3	1.75	1.80

* For filter fabrics and other industrial purposes only.
F.O.B. Odenton, Maryland.
Terms: Net 30 days.

NON CELLULOSIC STAPLE & TOW ACRYLIC

The Chemstrand Corp.

Current Prices

"Acrilan"*

Effective October 1, 1957

	Regular Acrilan	Acrilan 16
2.0 denier Semi-Dul and Bright staple & tow	$1.24	$1.24
2.5 denier Hi-Bulk Bright and Semi-dull staple and tow	1.16	1.16
3.0 denier Bright & Semi-dull staple & tow	1.16	1.16
5.0 denier Bright & Semi-dull staple & tow	1.16	1.16
8.0 denier Bright & Semi-dull staple	1.16	1.16
15.0 denier Bright & Semi-dull staple	1.01	1.05

Terms: Net 30 days. Freight prepaid to points east of the Mississippi River.

* "Acrilan" is Chemstrand's registered trademark for its acrylic fiber.

The Dow Chemical Company

Textile Fibers Department
Current Prices

"Zefran"*

2.0 denier Semidull & Bright—Staple only	$1.33
3.0 denier Semidull & Bright—Staple only	1.28
6.0 denier Semidull & Bright—Staple only	1.20

Terms: Net 30 days.

Transportation Terms: F.O.B. shipping point—Freight prepaid our route to points east of the Mississippi River within the continental limits of the U. S., for points west of the Mississippi River crossing nearest purchaser's mill if shipped overland or port of exit of purchaser's choice east of the Mississippi River.

* "Zefran" is Dow's registered trademark for its acrylic alloy fiber.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.
Current Prices

"Orlon"** Acrylic Staple & Tow

Type 42	1st Grade
1.0 Denier Semidull & Bright—Staple only	$1.48
2.0 Denier Semidull & Bright	1.33
3.0 Denier Semidull & Bright	1.28
3.0 Denier Semidull Color-sealed Black	1.63
6.0 Denier Semidull & Bright	1.20
6.0 Denier Color-sealed Black	1.55
4.5 Denier Semidull	1.20
10.0 Denier Semidull	1.20

Tow—Total Denier 470,000
Staple Lengths—1½", 2", 2½", 3", 4½"
High Shrinkage Staple same price as Regular Staple

Type 39 $1.06
This product is designed for *woolen system spinning* and is a blend of deniers (average 4.2) with a variable cut length.

Type 39A $1.14
This product is designed for *woolen system spinning* and is a blend of predominately fine deniers (average 2.4) with a variable cut length.

Type 39B $1.01
This product is designed for *woolen system spinning* and is a blend of predominately heavy deniers (average 6.5) with a variable cut length.

F.O.B. Shipping Point—Freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Terms: Net 30 Days.

** "ORLON" is DuPont's registered trade-mark for its acrylic fiber.

Eastman Chemical Products, Inc.
Tennessee Eastman Co.

Effective November 15, 1956

"Verel"*

Deniers	Dull and Bright
2, 3, 5 and 8	$1.10 per pound

Prices are subject to change without notice.

Terms: Net 30 days. Payment—U. S. A. dollars.

Transportation charges prepaid or allowed to destination in the United States east of the Mississippi River. Seller reserves the right to select route and method of shipment. If buyer requests and seller agrees to a route or method involving higher than lowest rate buyer shall pay the excess of transportation cost and tax.

* "Verel" is a trade-mark of the Eastman Kodak Co.

Union Carbide Chemicals Co.

Div. Union Carbide Corp.
Textile Fibers Dept.
Effective October 1, 1957

Dynel Staple & Tow

Natural Dynel	
3 and 6 Denier, Staple and Tow	1.10 per lb.
24 Denier, Staple and Tow	1.05 per lb.
Dynel Spun with Light Colors: Whitened, Blond, or Gray	
3 and 6 Denier, Staple and Tow	1.30 per lb.
Dynel Spun with Dark Colors: Black, Charcoal, and Brown	
3 and 6 Denier, Staple and Tow	1.40 per lb.
Dynel Type 63 Bulking Fiber (3 Denier only)	Add $.05 per lb. to above prices

Prices are quoted f.o.b. South Charleston, W. Va.

NYLON

American Enka Corp.

Enka Nylon (Nylon Six Staple)

Denier	Luster	Length (Inches)	Price per pound
3	semi-dull	1⅛, 1½, 2, 2⅝, 3, 4½	$1.28
6	bright	3, 4½	1.28
8	bright	2⅝	1.20
10	bright	3	1.20
15	bright	3	1.20
15	semi-dull	3	1.20

Deniers and lengths of staple not listed above are available upon special request.

Terms: Net 30 days. Minimum common carrier transportation charges will be prepaid and absorbed to the first destination on or east of the Mississippi River. In prepaying transportation charges, seller reserves the right to select the carrier used.

NYLON
DACRON
RAYON
WORSTED

COMPLETE PACKAGE SERVICE on dyed and thrown filament yarns, delivered on tubes, cones or in the cake.

Spun and Worsted Yarns

Dyers & throwsters of modern yarns since 1922

HOFFNER
RAYON CO.

GENERAL OFFICES

General Offices at Belgrade & Ontario Streets, Philadelphia 34, Pennsylvania. Plants at Philadelphia and Quakertown, Pennsylvania.

SALES REPRESENTATIVES

The Tillinghast-Stiles Co.
Providence, R. I. Chicago, Ill.
Shannonhouse & Wetzell, Johnston Building, Charlotte 2, N. C.

Whitin Acquires Landis

Fayscott Corp., wholly-owned subsidiary of Whitin Machine Works, has acquired the Landis Machine Co. in St. Louis, Mo. It is anticipated that the Landis shoe repair machinery manufacturing facilities will be consolidated at Fayscott's plant in Dexter, Me. The acquisition will further diversify Whitin, whose products already include Masterlith offset duplicators, printing presses, electronic equipment and machine tools.

Parks & Woolson to Operate

Parks & Woolson Co., recently acquired by Riggs & Lombard, Inc., will continue to manufacture wet and dry finishing machinery at Springfield, Vt. The acquisition of Parks & Woolson, and also the Cook Machine Co. line of finishing machines for cottons and synthetics, permits Riggs & Lombard to provide a fully rounded finishing equipment service for the textile industry.

Acrilan Controls for Rugs

The Chemstrand Corp. has launched a special trademark program in the carpet industry for its Acrilan acrylic carpet staple. Chemstrand said that, in order to assure continued customer satisfaction and further success at the retail level, it was establishing a quality control program. The trademark, "Acrilan Carpet," can be used by license by carpet manufacturers which meet minimum standards set up by Chemstrand. *For further information write the editors.*

Synthane Names Agent

Synthane Corp., manufacturer and fabricator of industrial thermosetting laminated plastics, has named Arthur A. Carlson & Associates, St. Petersburgh, Fla., as exclusive sales agent for the firm in Florida. Synthane has its own sales representatives throughout the U. S. and Canada.

New Textile Workbook

A new textile workbook, "Fabric Science," should prove useful to students of textiles, clothing, merchandising, and to others who deal with fabrics. The author, Joseph J. Pizzuto, is a graduate of Lowell Technological Institute and has taught the subject of textiles in New York City schools for 20 years. For the past three years he has been coordinator of the textile science department of the Fashion Institute of Technology in New York. The book contains 75 units or lessons, each one consisting of: Statement of aim, list of materials required, procedure with questions interspersed, space for answering questions and space for mounting samples. *The 168-page book, priced at $3.75 per copy, may be obtained from the Textile Press, Box 173, Pelham, N. Y.*

Accurate

Yarn is under perfect tension from a central location. One dial adjustment changes tension uniformly at all tension stations.
The Lindly Electrotense: Simple, compact, inexpensive. Accurately controls yarn tension from zero to about 20 grams.

DIAL CONTROL
of YARN TENSION
at Any Number
of Stations!

The Lindly ELECTROTENSE is the new, inexpensive, electro-mechanical way to control yarn tension from almost zero to about 20 grams. A turn of a single, centrally located dial applies desired tension evenly and simultaneously at all tension stations.

What are the advantages?

The Lindly ELECTROTENSE permits easy, instant change of yarn tension. It results in more uniform beams, more yarn per warp beam, less maintenance and machine down-time, fewer broken ends and better cloth.

GET THE FULL FACTS ON THIS NEW TIME-SAVING, QUALITY-IMPROVING, COST-CUTTING LINDLY SYSTEM. WRITE, WIRE OR PHONE TODAY!

It Pays to Know LINDLY the Lindly Count

LINDLY & COMPANY, INC.
248 HERRICKS ROAD
MINEOLA, NEW YORK

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.
Current Prices

Nylon Staple and Tow

Denier	Type	Staple Lengths	Tow Bundle	1st. Grade Price/Lb.	2nd Grade Staple Only
1.5	200	1½"—4½"	None made	$1.33	$1.18
1.5	201	1½"—4½"	None made	1.35	1.20
3.0	100/200	1½"—4½"	430M	1.28	1.13
3.0	101/201	1½"—4½"	455M	1.30	1.15
6.0	100	1½"—4½"	330M	1.28	1.13
6.0	101	1½"—4½"	345M	1.30	1.15
15.0	100	1½"—6½"	425M	1.20	1.05
15.0	101	1½"—6½"	None made	1.22	1.07
15.0	600	1½"—6½"	425M	1.22	1.07
15.0	601	1½"—6½"	None made	1.24	1.09

Staple lengths are restricted to the range shown opposite each denier above. The actual cut lengths within these ranges are as follows:

1½, 1½, 2, 2½, 3, 4½ and 6½

Types

Type 100 Bright, normal tenacity, not heatset.
Type 101 Bright, normal tenacity, heatset.
Type 200 Semidull, normal tenacity, not heatset.
Type 201 Semidull, normal tenacity, heatset
Type 600 Dull normal tenacity, not heatset.
Type 601 Dull normal tenacity, heatset.
These prices are subject to changes without notice.
Terms—Net 30 Days.
Freight Terms—Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Industrial Rayon Corp.

Effective November 29, 1956

Nylon Staple

1.5 denier	$1.33 per lb.
2, 3 and 6 denier	1.28 per lb.
8, 15 and 22 denier	1.20 per lb.

Bright, semi-dull, and full-dull. Required lengths.
Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges prepaid with transportation allowed at lowest published rate to all points east of the Mississippi River.

POLYESTER

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.
Current Prices

"Dacron"* Staple and Tow

Denier	Luster	Type	Length	Tow Bundle	1st Gr.
1.25	Semidull	54	1¼"-3"		$1.56
1.5	Semidull	54	1¼"-3"	375M-600M	1.51
3.0	Semidull	54	1¼"-4½" & Tow	375M-500M	1.41
4.5	Semidull	54	1¼"-4½" & Tow	375M-500M	1.41
6.0	Semidull	54	1¼"-4½" & Tow	375M-500M	1.41

Terms: Net 30 Days.
F. O. B. Shipping Point—Freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

POLYVINYL ACETATE

American Viscose Corp.

Effective October 1, 1956

"Vinyon"® Staple

3.0 denier	½" unopened	$.80 per lb.
3.0 "	1¼" unopened	.80 per lb.
3.0 "	1¼" opened	.90 per lb.
3.0 "	2" opened	.90 per lb.
3.0 "	2" unopened	.80 per lb.
5.5 "	1" opened	.90 per lb.
5.5 "	3½" opened	.90 per lb.
5.5 "	3½" unopened	.80 per lb

Terms: Net 30 days.

SARAN FIBERS

The Saran Yarns Company — Odenton, Maryland

The Hall Company (Selling Agent)
41 East 42 Street, New York 17, N. Y. (Oxford 7-8996)
Current Prices:

Saran Staple

Type	Denier	Natural	Colors
2N	22	$0.70	$0.75
2N	16	.74	.79
3Q*	22	.63	.67

In any staple length 1½ to 6". Also 45 denier, 7" cut.
* For carpets and industrial fabrics.
F.O.B. Odenton, Maryland.
Terms: net 30 days.

METALLICS

The Dobeckmun Company

Lurex Yarn Division Current Prices

Lurex-MM (Made with Metalized Mylar)

	Guage	Width	Yield	Price Gold & Silver	Price Standard Colors and Multicolors
Silver Only					—
					—
					—
	150	1/128"	38,000	10.90	—
	150	1/100"	29,500	10.65	
	150	1/64"	19,000	8.35	
	150	1/50"	14,500	8.20	On Request
	150	1/32"	9,500	8.05	
	150	1/16"	4,750	7.90	

Lurex-MF (Mylar-Foil-Mylar) April 28, 1958

Guage	Width	Yield	Price Gold & Silver	Price Standard Colors and Multicolors
150	1/100"	25,000	$8.95	$9.30
150	1/64"	17,200	5.70	6.30
150	1/50"	12,500	5.60	6.15
150	1/32"	8,600	5.50	6.00
150	1/16"	4,000	5.45	5.85

Lurex (Regular, "Butyrate") July 1, 1957

Guage	Width	Yield	Price Gold & Silver	Price Standard Colors and Multicolors
260	1/100"	16,400	$4.50	
260	1/80"	13,000	4.00	
260	1/64"	10,500	3.35	
260	1/50"	8,200	3.25	On Request
260	1/32"	5,200	3.00	
260	1/16"	2,600	2.85	

A. Lurex, Lurex-MM and Lurex-MF are the registered trade-marks of The Dobeckmun Company. Lurex-MM is covered by U. S. Patent #2714569, Serial #267,108. Multicolor is Patent Pending. Mylar is DuPont's polyester film.

B. Standard Colors:

L-941	Scarlet	L-981	Pink Opal
L-984	Turquoise	L-942	Peacock Blue
L-940	Emerald Green	L-983	Violet
L-861	Bronze	L-978	Gunmetal
2A-1	Multicolor	3A-2	Multicolor
4A-5	Multicolor	4A-7	Multicolor
6A-1	Multicolor	6A-2	Multicolor
L-869	Fuchsia	L-982	Blueflower
L-935	Royal Blue	L-980	Apple Green
L-1008	Purple	L-933	Copper
L-850	Jet	L-1007	Green Gold
3A-3	Multicolor	1A-3	Multicolor
4A-14	Multicolor	4A-4	Multicolor
6A-3	Multicolor	4A-15	Multicolor
		3A-4	Multicolor

C. Other colors available on a *custom basis only* for which a minimum firm order of 150 lbs. is required.
Regular color prices will apply.
After approval of color swatch, one sample run of 10 lbs. or over can be ordered with an up-charge of $2.00 per lb. over regular color prices.

D. Lurex-MM, Lurex-MF and regular Lurex is supplied on disposable spools having plastic end plugs with ⅜" I.D. holes. Spools contain approx. 1 lb. of yarn.

E. Cases contain 6 "LUR-PAKS". Each "LUR-PAK" contains 6 one pound spools.
Weight Data: 1 case 1 lb. spools, gross wt. approx. 44 lbs.—tare wt. approx. 10 lbs.—net wt. approx. 34 lbs.

F. Yields are subject to variation of plus or minus 5%.

G. Terms: 1% 10 days from date of invoice, net 30 days, F.O.B. Cleveland, Ohio. Minimum freight allowed on shipments of 100 pounds and over.

H. Quantity Discount 2,000 to 5,000 lbs., 3%—5,000 lbs. and over, 5%.

Lurex Staple

	#260 Butyrate	#150-MF	#150-MM	#100-MM
Straight	$3.00	$5.55	$7.65	$9.50
Crimped	3.10	5.65	7.75	9.60

A. Widths—1/64", 1/100", 1/120", 1/200".
B. Lengths—½" to 6½" in increments of ½".
C. Colors—Gold, Silver, others on request.
D. Put-Up: Cartons containing approx. 20# net, 23# gross.
E. Terms: 1% 10 days, net 30 days, F.O.B. Haverhill, Mass. No freight allowed.

Lurex Metalflake

Lurex is available in a series of types of sizes in precision squares, hexagons, rectangles and stars. Further information on request.

Fairtex Corporation

1808 Liberty Life Building
Charlotte 2, N. C.
January 23, 1958

1. Fairtex No. 260 (butyrate)—gold, silver and copper.

Width	Yield (Per Pound)	Price (Per Pound)
1/120"	21,000	$4.75
1/80"	13,000	4.00
1/64"	10,800	3.35
1/50"	8,400	3.25
1/32"	5,300	3.00
1/16"	2,600	2.85
1/8"	1,300	2.70

2. Fairtex with Mylar* No. 100V (2 ply), (metallized type)—silver only.

1/100"	48,000	$13.25
1/80"	37,000	11.40
1/64"	31,000	10.40
1/50"	24,200	10.15
1/32"	15,500	9.80

R. O. Smith E. J. Tolle

E. J. Tolle, formerly with General Aniline, has joined Instron Engineering Corp., as sales manager. **Robert O. Smith** has joined Instron as production manager. He was formerly with Bromfield Associates.

M. D. Crawley

Milton D. Crawley has been appointed to the southern sales staff of Victor Ring Traveler, Div. of Saco-Lowell Shops serving parts of Georgia, Alabama, and Tennessee.

Wesley L. Prince, Jr., has been appointed southern district sales manager for Hartford Rayon Co., with headquarters in Atlanta.

Louis S. Booth has been elected a director of Lockwood Greene Engineers, Inc. and has become chief architect of the Spartanburg office.

R. B. Stevens

Richard B. Stevens has been appointed district manager of the Greensboro sales office of Steel Heddle Manufacturing Co.

Maynard H. Patterson, Robert W. Mueller, and **Lyle H. Fisher** have been elected vice presidents of Minnesota Mining & Manufacturing Co. **Harold F. Larson** has become assistant treasurer.

Charles Lighthipe has been appointed technical director of the industrial laboratories of Nopco Chemical Co. and **Dr. Ramsey Christian** has become director of the industrial development laboratories.

Haven A. Morrison has joined the New England sales force of Putnam Chemical Corp.

Wm. E. Rider

William E. Rider has been appointed director of public relations at American Rayon Institute, Inc. He formerly handled similar activities at American Cyanamid Co.

George E. MacPhee has been appointed director of manufacturing for Bigelow-Sanford Carpet Co., Inc.

Charles Powers has been appointed vice president of Cabin Crafts, Inc., and general manager of Cabin Crafts, New York.

K. N. Bacon

Kenneth N. Bacon has joined Anderson & Cairns, Inc. as an account executive. He had been associated previously with American Enka Corp., whose account he will now handle, among others, for Anderson & Cairns.

Richard De Temple has become manager of the newly-created Fancy and Fashion Fabrics Department of the Greige Goods Division of Amerotron Corp.

Hans W. Krause has joined the synthetic fibers group, Textile Fibers Department of Union Carbide Chemical Co.

Richard Neuer has joined Stein Hall & Co., Inc. as a sales representative in the company's New York branch sales office.

Elmer Roth has been named controller of Whitin Machine Works.

cut production COSTS 4 ways! ... with MECHO AIR GUIDER

1 SAVE by eliminating expensive spoilage!

2 SAVE by cutting handling costs, reducing damage and loss!

3 SAVE by reducing costly equipment repairs!

4 SAVE with the low initial and operating cost of the Mecho Air Guider!

Hundreds of finishing plants bless the simplicity of operating a Mecho Guider . . . no complicated counter-weights or linkages! The sensitive selvage finger points the way to important savings! It handles every imaginable fabric from the lightest to #8 duck; is used in plants handling woven and non-woven fabrics, semi-rigid plastics, artificial leather, rubber, felt and gauze. Constant cloth alignment is maintained at all times.

The precision-engineered accuracy of the Mecho Air Guider, guiding to within an eighth of an inch and ranging from 1 to 400 ypm, is unsurpassed! Stainless steel, acid and moisture-resistant units with sealed bearings are also available.

Mecho offers a valuable Guiding Service. Phone, wire or write for your catalog today. Learn how the Mecho Air Guider can save dollars for you.

The GUIDER Specialty Company 423 W. Rock Ave. New Haven 15, Conn.

Fairtex with Mylar* No. 150V (3 ply), (metallized type)—gold, silver and copper.

1/100"	32,000	$10.65
1/80"	25,000	9.25
1/64"	21,000	8.35
1/50"	16,400	8.20
1/32"	10,500	8.05

3. Fairtex with Mylar* No. 150F, (foil type)—gold, silver and copper.

1/100"	28,000	$7.75
1/80"	21,450	7.00
1/64"	17,200	5.70
1/50"	13,400	5.60
1/32"	8,600	5.50
1/16"	4,300	5.45

4. General Information:
   a. Staple available upon request on above types.
   b. Above types also available supported with Nylon, Fortisan or other synthetics.
   c. Colors available on above upon request at slight additional cost.
   d. Quantity discounts on above prices.
   e. Fairtex is supplied on 1 lb. disposable spools—48 spools per case and on ½ lb. disposable spools—100 spools per case.

Metlon Corp.

Effective April 28, 1958

Metlon*-Mylar** Price List

Metlon* F-Mylar (Foil Laminated)

Width	Yards Per Lb. (Plus or minus 5%)	Price Per Lb. Gold or Silver	Standard Colors
1/120"	32,200	$9.80	$10.15
1/80"	21,500	7.10	7.45
1/64"	17,200	5.70	6.30
1/50"	13,500	5.60	6.15
1/32"	8,600	5.50	6.00
1/16"	4,300	5.50	6.00
1/8"	2,150	5.50	6.00

Quantity Discounts: 2,000 lbs.—3%
5,000 lbs.—5%

To earn discount, quantity ordered must be withdrawn within 90 days from date of order.

Terms: 1% 10 days, net 30. F.O.B. Providence, Rhode Island. Minimum freight allowed on shipments of 100 lbs. or over.

Put Up: Plastic Disposable Spools.

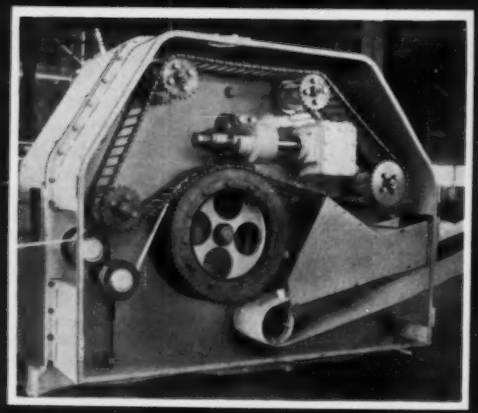
Minimum Order: One case (approximately 40 lbs. net). Smaller quantities subject to surcharge.

Palletizing: On request, shipments of 4 cases or more will be palletized without additional charge.

Prices apply to continental U. S. A., Canada and Mexico.

* Metlon's registered trademark for non-tarnishing metallic yarn.
** DuPont's registered trademark for polyester film.

Boki Cutter



The latest cutter

for synthetic staple fibres

max. tow size 1,500,000 denier
max. speed 200m/min.
most uniform cut length

(U.S. Patent applied for)

Representative for overseas

Osaka Consultants Company, Ltd.,
15, Dojima-Funadaiku-cho, Kita-ku, Osaka, Japan.

Maker:

BOKI SEIZO COMPANY, LTD.

Reynolds Metals Co.

Reynolds Aluminum Yarns

January 29, 1958

200 Series

	PRODUCT NUMBER	WIDTH	APPROX. YIELDS IN LINEAL YDS. PER LB.	¢ PRICE PER POUND—48 THRU 1,999 POUNDS (1) Standard Colors	(2) Special Colors	(3) Non-Standard Colors	(4) Multi-Colors
Acetate-Butyrate	204	1/8"	1,350	$2.80	$3.05	$3.05	$3.05
	204	1/16"	2,700	2.85	3.10	3.10	3.10
	204	1/32"	5,400	3.00	3.25	3.25	3.25
	204	1/50"	8,450	3.25	3.50	3.50	3.50
	204	1/64"	10,800	3.35	3.60	3.60	3.60
	204	1/80"	13,500	4.00	4.25	4.25	4.25
Mylar-Foil	230	1/8"	1,450	$5.60	$5.95	$5.95	$5.95
	230	1/16"	2,900	5.75	6.10	6.10	6.10
	230	1/32"	5,800	5.90	6.25	6.25	6.25
	230	1/50"	9,050	6.05	6.40	6.40	6.40
	230	1/64"	11,600	6.20	6.55	6.55	6.55
	230	1/80"	14,450	7.25	7.60	7.60	7.60
Mylar-Foil	235	1/8"	2,150	$5.35	$5.70	$5.70	$5.70
	235	1/16"	4,300	5.45	5.85	5.85	5.85
	235	1/32"	8,600	5.50	6.00	6.00	6.00
	235	1/50"	13,400	5.60	6.15	6.15	6.15
	235	1/64"	17,200	5.70	6.30	6.30	6.30
	235	1/80"	21,450	7.00	7.35	7.35	7.35
Mylar-Foil	215	1/8"	1,730	$5.30	$5.65	$5.65	$5.65
	215	1/16"	3,460	5.45	5.80	5.80	5.80
	215	1/32"	6,920	5.60	5.95	5.95	5.95
	215	1/50"	10,800	5.75	6.10	6.10	6.10
	215	1/64"	13,840	5.90	6.25	6.25	6.25
	215	1/80"	17,270	6.95	7.30	7.30	7.30

Reymet Staple: Foil Mylar $6.00 per lb.

Metallized Mylar: $10.50 per lb. These can be cut in width to 1/220", also full range of Colors.

(1) Standard Yarn Colors: Silver and Gold.

¢ (2) Special Yarn Colors: Refer to Products Supervisor, Special Foil Products located at Richmond, Va.

(3) Non-Standard Yarn Colors: Refer to Products Supervisor, Special Foil Products located at Richmond, Virginia.

(4) Multi-Colors: One or two colors.

¢ Quantity Discounts to be applied on invoice:
5,000 lbs. and over less 5%.
2,000 thru 4,999 lbs. less 3%.

Items can be grouped for quantity price provided each is held to a minimum of 250 pounds. No grouping for less than 250 pounds.

Minimum acceptable orders for standard and special colors is 48 pounds per size and color.

Minimum acceptable order for non-standard colors is 150 pounds per size and color.

AVAILABLE PACKAGES:

Following types available:

Die-cast aluminum spools with straight flange; 3" O.D., 3¼" traverse. Each spool contains approximately 8 ounces of yarn. These spools, billed at $.40 each are returnable for credit in good condition, F.O.B. Reynolds Metals Company, 11th & Byrd Streets, Richmond, Virginia.

No charge returnable plastic spools with 3¼" O.D., 4½" traverse. Each spool contains approximately 1 pound of yarn. These spools are returnable for credit @ $.02 each F.O.B. customer's plant. Subject to inspection and count of seller.

Tin spools with straight flange with 3" O.D., 3¼" traverse. Each spool contains approximately 8 ounces of yarn. These spools, billed at $.10 each are returnable for credit in good condition, F.O.B. Reynolds Metals Company, 11th & Byrd Streets, Richmond, Virginia.

PACKING:

36 spools per corrugated fiber carton, size 18-1/16" x 14-1/16" x 11".

ORDERING DATA:

Specify Product, Width, Color and Type of Spool.

Aluminized Series

PRODUCT NUMBER	WIDTH	APPROX. YIELDS IN LINEAL YARDS PER POUND	PRICE PER POUND 48 THRU 1999 POUNDS
250	1/32"	10,000	$8.05
250	1/50"	15,650	8.20
250	1/64"	20,000	8.35
250	1/80"	25,000	10.25
255	1/32"	15,500	$9.80
255	1/50"	24,200	10.15
255	1/64"	31,000	10.40
255	1/80"	38,700	12.40

250 offered in silver and gold.
255 offered in silver only.

Quantity discounts to be applied on invoice:
2,000 lbs. and over less 3%.
5,000 lbs. and over less 5%.

Sizes can be grouped for quantity price providing each is held to a minimum of 250 lbs.

No grouping for less than 250 lbs. Minimum acceptable order is 48 pounds per item.

AVAILABLE PACKAGES:

Following types available.

Die-cast aluminum spools with straight flange, 3" O.D., 3¼" traverse. Each spool contains approximately 8 ounces of yarn. These spools, billed at $.40 each, are returnable for credit in good condition, F.O.B. Reynolds Metals Company, 11th and Byrd Streets, Richmond, Virginia.

No charge returnable plastic spools with 3¼" O.D., 4½" traverse. Each spool contains approximately 1 pound of yarn. These spools are returnable for credit @ $.02 each, F.O.B. customer's plant. Subject to inspection and count of seller.

Tin spools with straight flange with 3" O.D., 3¼" traverse. Each spool contains approximately 8 ounces of yarn. These spools, billed at $.10 each, are returnable for credit in good condition, F.O.B. Reynolds Metals Company, 11th and Byrd Streets, Richmond, Virginia.

PACKING:

36 spools per corrugated fiber carton, size 15¼" x 14½" x 11".

ORDERING DATA:

Specify Product, Color, Width, and Type of Spool.

AATT Papers

(Continued from Page 56)

Discussion

Following the presentation of the prepared talks, there was an open discussion period with questions from the audience and answers by the speakers. Dr. Wham served as moderator. The following is a summary of the questions and answers.

HOLGER THUEMMEL (National Aniline Division, Allied Chemical Corp.): Have your tests on white men's shirts shown any to be acceptable as wash and wear garments?

P. J. FYNN: In our laboratory, we find very few things that can take a wash and wear, no ironing label. I doubt if 23% of the stuff that is brought to us could honestly bear that label. But we do have a broad category of material that we can honestly label as wash and wear, little or no ironing, and that applies to our white broadcloth dress shirts.

S. I. VAN VLIET (Greenwood Mills): Should we expect any decrease in drying time with wash-wear finishes as compared to standard washable fabrics?

GEO. KRUMHOLZ: I don't think there is any great difference in drying time.

WHAM: In my opinion, drying time is decreased considerably by the application of resins, possibly as much as 50%.

KRUMHOLZ: Cotton shirts with a resin finish which are drip-dried might dry more rapidly, but just how measurable such faster drying might be is hard to say.

ARTHUR KAHN (Arthur Kahn Co., Inc.): "You mentioned it took only 7 minutes to iron a 'little or no ironing' shirt, and 20 minutes for a shirt not so treated. What kind of tests and timing were these and by whom have these tests been made?"

KRUMHOLZ: I believe I made that statement in my talk. Those times that are given are general. In other words, 1% that we selected took that much time to dry iron a regular shirt, as compared with just a couple of minutes for touch-up ironing. I pointed out that even the most fastidious person could completely dry iron a shirt in a probable 5 to 7 minutes.

KENNETH A. SEWARD (Greenwood Mills, Inc.): Is there any value in a wash and wear finish applied to a slack or trouser fabric when there is no accompanying press retention property imparted by the finish?

FYNN: Part of our method of evaluating the validity of a wash and wear claim is how well the fabric retains its crease in the case of a slack or trouser. If the crease line completely disappears after the garment has been washed, even if the fabric dries smoothly, we don't consider that a successful wash and wear garment. We like to see a fairly sharp crease remain in a wash and wear slack or trouser.

DAVID ROGOFF (U. S. Testing Co.): I noted that several different types of washing machines were mentioned by the various speakers. Is there any difference in wash and wear tests run on tumbler machines as contrasted with agitator machines?

WHAM: I believe that the general consensus is that there might be minor differences. We conducted in the AATCC Test Committee some work in this direction; certain laboratories using tumbler types, others using agitator types, and we could not see too much difference. Except for the washer-dryer combinations, the greater number of machines in consumer use are agitator types, so I think we are being more realistic when we deal with the agitator rather than the tumbler type. ■

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DIAMOND FINISH RINGS
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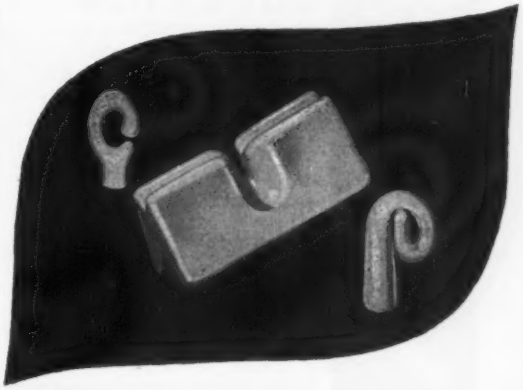

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ALLENTOWN PENNSYLVANIA

Fabrics

(Continued from Page 46)

Men's Wool-Dynel Suits

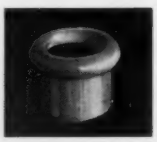
Browning King is introducing at a special promotional price of $69.50 its new men's suits of worsted and Dynel. Tailored of a newly developed tropical fabric of 65% worsted and 35% Dynel, Union Carbide Corp.'s acrylic fiber, the suits are designed to resist wrinkling and hold their shape and trouser crease. The fabric weighs only 4.1 ounces per square yard. *For further information write the editors.*

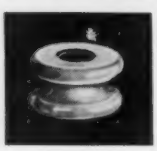
Nylon Floor Covering

Wunda Weve Carpet Co. is increasing production and color availability of its wool carpeting and is supplementing colors and sizes to their all-nylon, scatter and broadloom carpeting. Wunda Fluff, the company's newest nylon floor covering line, is being expanded with three new colors, augmenting the seven pastel colors which formed the original offering. The nylon scatter sizes begin at $8.95 retail and broadloom at $14.95 per square yard.

Fiberglas Window Shades

Facile Corp. will soon have available "Plastiglas" vinyl window shades reinforced with glass fibers. The new shades are reported to be fire-resistant, washable and shape retaining even with constant use. The material from which the shades are made, is mildew and rot proof, according to the manufacturer. The glass fibers are produced by Owens-Corning Fiberglas Corp. The shades will be offered in four colors, in widths of 36, 42 and 48-inches, and in standard window lengths. The 36-inch wide, 6-foot long shade will retail for about $1.98. *For further information write the editors.*





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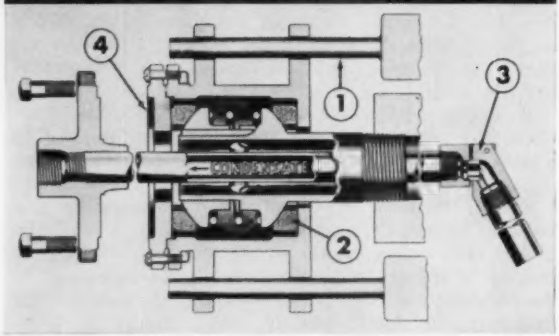

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Calendar of Coming Events

Jul. 20-23—Textile Merchants and Associated Industries Exhibit. Sheraton-Jefferson Hotel, St. Louis, Mo.
Aug. 18-22—Massachusetts Institute of Technology summer program Techniques in Textile Research. M.I.T., Cambridge, Mass.
Aug. 25-29—Massachusetts Institute of Technology summer course on The Mechanics of Textile Structures, M.I.T., Cambridge, Mass.
Sep. 9-10—The Fiber Society, Inc. fall meeting. Queen Elizabeth Hotel, Montreal, Canada.
Sep. 10—AATT monthly meeting. Della Robbia Room, Hotel Vanderbilt, New York, N. Y.
Sep. 11-12—Combed Yarn Spinners Association annual meeting. The Cloister, Sea Island, Ga.
Sep. 12—Delaware Valley Section AATCC meeting. Wilmington, Del.
Sep. 12—Northern New England Section AATCC outing. Wachusett County Club, West Boylston, Mass.
Sep. 13—South Central Section AATCC meeting. Hotel Patten, Chattanooga, Tenn.
Sep. 19-20—AATCC Piedmont Section. Hotel Charlotte, Charlotte, N. C.
Sep. 25-26—Northern Textile Association. Wentworth-by-the-Sea, Portsmouth, N. H.
Sep. 25-26—Textile Quality Control Association, fall meeting. Grove Park Inn, Asheville, N. C.
Oct. 1—AATT monthly meeting. Della Robbia Room, Hotel Vanderbilt, New York, N. Y.
Oct. 1-2—National Cotton Council, Chemical Finishing Conference. Washington, D. C.
Oct. 6-10—Southern Textile Exposition. Greenville, S. C.
Oct. 9-10—North Carolina Textile Manufacturers Association annual meeting. Carolina Hotel, Pinehurst, N. C.
Oct. 10—Southern Textile Overseers Association. Greenville, S. C.
Oct. 11—Textile Operating Executives of Georgia. A. French Textile School, Atlanta, Ga.
Oct. 13-16—National Industrial Packaging, Handling and Shipping Show. The Coliseum, Chicago, Ill.
Oct. 14-17—ASTM Committee D-13 on Textiles. Sheraton-McAlpin Hotel, New York, N. Y.
Oct. 15-25—International Textile Machinery Exhibition. Belle View, Manchester, England.
Oct. 23-24—Southern Textile Methods and Standards Assoc. Clemson House, Clemson, S. C.
Oct. 25—Alabama Textile Operating Executives fall meeting. Thach Auditorium, Auburn, Ala.
Oct. 28-31—Carded Yarn Assoc. annual meeting. The Homestead, Hot Springs, Va.
Oct. 30-Nov. 1—AATCC National Convention. Hotel Conrad Hilton, Chicago, Ill.
Nov. 5—AATT monthly meeting. Della Robbia Room, Hotel Vanderbilt, New York, N. Y.
Nov. 7-8—Textile Seminar sponsored by University of Georgia Division of Clothing and Textiles in Extension, Teaching, and Research. Georgia Center for Continuing Education, Athens, Ga.
Nov. 17-19—Narrow Fabrics Institute, annual meeting. Hotel Roosevelt, New York, N. Y.

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